



### Contents

- 3 Introduction
- 5 A children's human rights approach
- 7 Methodology
- 10 Meet the Investigators
- 11 Exploring children's views, knowledge and understanding of Al
- 31 Reflections from The Alan Turing Institute
- 33 Emerging themes and next steps
- 38 Thank you

### Introduction

"It is important for children to know about artificial intelligence because it is the future and it is good to learn new things when they affect our lives."

- Member of Children's Parliament (MCP), age 10, Glasgow

Children's Parliament was invited to develop a programme of work around engaging children with artificial intelligence (AI), working in partnership with the Scottish AI Alliance (SAIA) and The Alan Turing Institute. The findings of this partnership will feed into the delivery of the vision set out in Scotland's AI Strategy, (launched in March 2021) for Scotland to become a leader in the development of trustworthy, ethical and inclusive AI. In line with the vision, the Strategy recognised the specific challenges and opportunities that AI presents for

children. Along with the adoption of UNICEF's policy guidance on AI for children, the Scottish AI Alliance are committed to ensuring that the voices of children are heard in the delivery of the strategy's vision. Our close partnership with SAIA and, in this stage in particular, with the team at The Alan Turing Institute enabled the highly effective sharing of expertise which made a novel project such as this possible. The report that follows is a summary of the progress and findings of Stage 1 of a 3 Stage project running from 2022 to 2024.

**Stage 1:** Exploring children's views on AI (funded by The Alan Turing Institute) (June 2022 – March 2023)

**Stage 2:** Children's investigation into AI (funded by the Scottish AI Alliance) (April 2023 – March 2024)

**Stage 3:** Mainstreaming children's engagement in AI (funded by the Scottish AI Alliance) (April 2024 – September 2024)

Scotland is about to incorporate the United Nations Convention on the Rights of the Child (UNCRC) into domestic law. Scotland's adoption of UNICEF's policy guidance on AI for children aims to ensure that AI policies and systems in Scotland should aim to protect children, provide equitably for their needs and rights, and empower them to participate in an AI world by contributing to the development and use of AI.

Between September 2022 and March 2023, Children's Parliament and The Alan Turing Institute worked with children from four schools across Scotland to explore several themes: how children interact with AI now, what they know and think about it, and what they think the possibilities and risks are for AI in the future, with specific reference to any impact on children's human rights. We were guided in planning and delivering these sessions by a set of questions from The Alan Turing Institute:

- What do children currently know about AI?
- To what extent are children aware that they currently interact with AI?
- What do children want to know about Al and how it is used?
- What are children's current opinions or perceptions of AI? How do these adapt, strengthen or change as they learn more about the subject?
- How do children feel about the ways in which AI may be used to inform decisions about their lives (e.g. access to services)?

- How would children like AI to be used in the future?
- What do children think are the conditions that need to be met for uses of AI to be acceptable or to be of benefit to children or wider society?
- What do children think are the limits to how AI should be used in the future?
- Do children feel like they have a say in how AI is being used?
- How do children want to be involved in decision-making about future uses of AI?

Working through these questions in a series of in person and online sessions based around creative and exploratory activities, four themes have emerged as consistent areas of interest for the children:

- Al and Education
- Fairness and Bias
- Safety and Security
- The Future of Al

During the next stage of the project, the children will investigate each of these areas in greater depth; have opportunities to test AI concepts; and develop ideas for a framework for involving children in future AI development and policy.

## A children's human rights approach

Children's Parliament's work is underpinned by children's human rights. This means that our practice is rights-based, always moving towards realising the rights of every child as outlined in the United Nations Convention on the Rights of the Child (UNCRC). As practitioners, this means that we use a participatory approach when engaging with children on projects.

The UNCRC's articles include adults' responsibility to ensure that children grow up healthy, happy and safe. In the context of the rapidly growing development and use of Artificial Intelligence, in the everyday and at larger scales, this means that children must be directly consulted to ensure that their specific needs in how they use technologies and AI systems are safely met. In the words of one of the children involved in the project, when adults seek to build new AI systems that work for everyone, they should "just ask us [children]."

As Scotland moves towards legal incorporation of the UNCRC, children's participation in the development and implementation of new AI systems, including decisions made around the regulation of their use, is critical to ensuring they are kept healthy, happy

and safe. To facilitate their meaningful participation, children also have the right to an education on an issue that is becoming intrinsic to the technology they use and the services they access in their daily lives.

This project provided a rich opportunity to work with children, in their education settings, on how AI is created, used. and regulated in Scotland. A children's rights approach acknowledges both the responsibilities of adults to equip children with knowledge and understanding in relation to matters that affect them, and that children have a right to have a say on said matters. As such, building a space in which the children could participate as equal partners with Children's Parliament and The Alan Turing Institute was central to the project's success. It was made explicit throughout that the expectation was that both children and adults would be learning from each other. We are delighted to share the findings that come from exploring this interface between AI and children's human rights. Including children's views and experiences of AI will strengthen the implementation of new technologies and ensure that current systems can be used more responsibly by adults to keep children healthy, happy and safe.



## Methodology

For this project we adopted Children's Parliament's Investigator model. This rights-based model involves a hybrid approach: alternating between whole-class in-person workshops and online sessions with a smaller group of 'Investigators'. At all points, the children were involved in our facilitated sessions in an equal capacity as experts on children's experiences and children's human rights.

Children's Parliament and The Alan Turing Institute engaged with 87 children aged between 7 and 11 years old from four schools across Scotland; in Edinburgh, Glasgow, Shetland and Stirling. These 87 children comprise the AI Team; the reference group used to ensure a wide range of views and opinions are captured. All 87 children became 'Members of Children's Parliament' (MCPs) as a result of their involvement in the project.

From these four cohorts of children, 13 'Investigators' were chosen – a core group of the AI team who have served as the champions and children's human rights defenders for the programme, leading the investigation and sharing the views, experiences and ideas of all participating children. When choosing the Investigators, we endeavoured to work with children who were enthusiastic about the subject and who might benefit educationally or socially from their participation.

#### **Timeline**

#### 1. Introductory Workshops

In September and October 2022, staff from Children's Parliament and The Alan Turing Institute visited each of the four schools in turn to deliver a day of workshops introducing children's human rights and some basic principles of Al. We spoke about children's human rights in terms of what children need to be healthy, happy and safe, and to realise a life lived with dignity.

#### 2. Online Sessions

Once the Investigator children had been chosen, we met once or twice a month online to delve further into AI and children's human rights. Over the course of six 90-minute calls, the 13 Investigators discussed AI and its use in their communities, education, healthcare and entertainment. The calls were also a chance for the children to feed back the views and experiences of themselves and their classmates in regard to AI and their children's human rights. They gathered these views by completing Missions with their classes.

#### 3. Missions

In between the online sessions, the AI Team received Mission Packs in the post. The five different Missions comprised a set of activities aimed at facilitating exploration and discussion of an issue relevant to AI and children's human rights. The Missions covered the following themes:

**Mission 1**: All in our communities – uncovering what children already know about All and where they interact with it in their local communities.

**Mission 2**: How AI works (part 1) – a chance for the children to learn about machine learning by using an online game.

**Mission 3**: How AI works (part 2) – The Playground Predictor: a chance for the children to 'think like an AI system' and explore some of the problems that might come up when trying to make sure that AI systems are fair.

**Mission 4**: All in the present – an activity that used case studies of current uses of Al in communities, education, healthcare, and entertainment to explore where the use of Al might have an impact on children's human rights.

**Mission 5**: All in the future – a chance for the children to imagine a future where All is used to support all children to be healthy, happy and safe.

For each Mission (barring Mission 2), Children's Parliament visited one of the schools to carry out a 'Big Mission' - an enhanced version of the same activities but carried out over the course of a full day of workshops and filmed for the Stage 1 project film.

#### 4. The AI Residential and The Scottish AI Summit 2023

In March 2023, the 13 investigators came together in person for the first time for a 3 day residential. The focus of the residential was on celebrating the achievements of the children so far and preparing them for their appearance at The Scottish Al Summit in Glasgow. The Summit, arranged by project partners the Scottish Al Alliance (SAIA), brought together more than 400 Al professionals from across the UK and beyond and the Investigators, as representatives of The Al Team, presented both a workshop introducing attendees to children's human rights, and a plenary session in the form of a news report on the project and its findings so far.

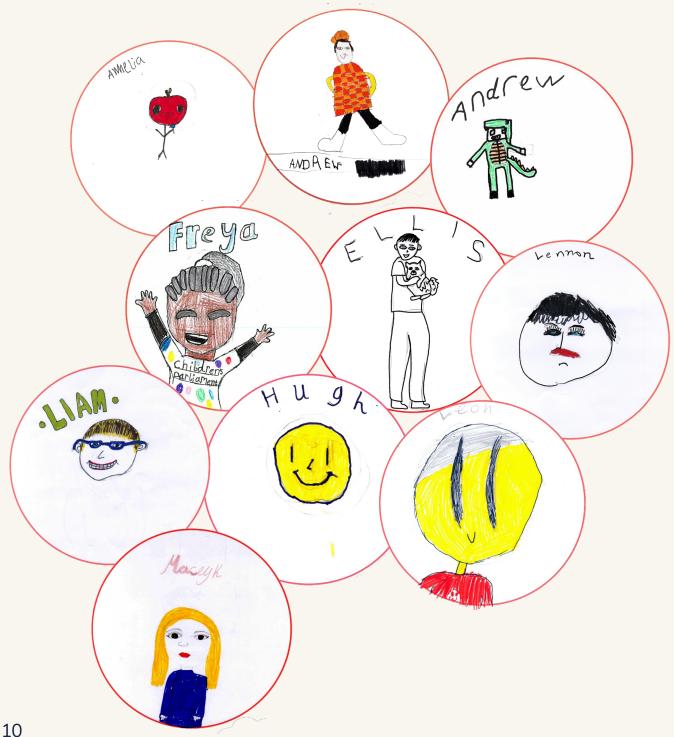
#### Max the Mascot

Central to rights-based practice is the building of relationships and friendships throughout the process. Given the distances between the schools, it wasn't possible for the children to work together in-person prior to the residential. Our mascot, Max the dog (chosen by the AI Team themselves), joined the team to bridge those distances; visiting each of the schools in turn to get to know the children and their communities, and even making it as far as The Alan Turing Institute in London! Max represents our connection through the project, and us as a group, and was with us at the AI Summit to help calm any nerves!



### Meet the Investigators

Our team of Investigators have done an incredible job of bringing together the views of the AI Team and presenting their thoughts and ideas. It was really special being able to bring them together at our residential and they blew their audience away at the Scottish Al Summit in March 2023; the children showed real bravery in the way they approached their input and on the residential were incredibly kind and supportive of one another.



# Exploring children's views, knowledge and understanding of Al

#### 1. Children's knowledge of Al

- What do children currently know about AI?
- To what extent are children aware that they currently interact with AI?
- What do children want to know about AI and how it is used?

#### What we did

To approach the concept of Artificial Intelligence with children, we began our investigation by looking at what they already knew about its use and development in their everyday lives. Some input from The Alan Turing Institute was necessary to begin with to clarify for the children what AI is and is not. They created creative and interactive ways of explaining some basic AI principles using YouTube algorithms as an example, as well as developing a game which asked the

children to write rules for an imagined AI system designed to allow cats to pass through an AI cat flap. This game introduced the children to the notion of machine learning.

For our first Mission, we worked with the children in person to produce community maps, where they identified both how they defined their "community" and where they thought they interacted with AI within this.



We also disseminated a survey, aimed at gathering a broader view of children's interactions with AI, to all the children in the participating classes before they took part in our first workshops with The Alan Turing Institute.

#### What we found

Children are engaged and familiar with the concept of AI being a part of their everyday lives but do not necessarily understand the detail of where and how it is used. They felt that it had a role in their education and social lives, and shared the benefits of being connected to the types of technology that AI is often a part of. "It was hard to know what was Al and what was [other] stuff. I think it can help by making finding routes to the shops faster on Google Maps."

- MCP, age 10, Shetland

From the survey of the Al Team, we learned that only 11 children were confident or very confident that they knew what Al is and what it does in their everyday lives.

Across all school groups, there was confusion around what technology uses AI and what does not. The children were more able to identify their use of the types of technology that may incorporate AI systems, such as smart speakers, but could not always pinpoint what or how AI was used in them. This made it difficult for them to describe how a child may use or feel about AI use.

"Is the school bell AI? I think it probably is!"

- MCP, age 10, Edinburgh

"I don't know a lot about AI but I do know what my rights are as a child, is AI when I search for videos on Tiktok?"

- MCP, age 10, Glasgow

The examples of AI use on the MCPs' community maps were mostly clustered around their homes and schools but responses differed in relation to the types of technology that children had access to. Some shared that they had multiple smart speakers around their homes, while others did not own any personal smart devices, such as phones.

In these instances, they were less likely to feel that they had encountered AI before in their everyday lives. Schools therefore became an important place where they could understand and name their interactions with AI systems, such as through educational games or the use of Google for research.



The Alan Turing Institute worked alongside us to build the children's knowledge of Al systems and their common uses. As the children grew in confidence in their children's human rights knowledge, themes began to emerge around the impact on their rights caused by this lack of knowledge about AI. For example, on the matter of AI and prediction, when presented with an example of an Al system that made decisions around children's needs based on data from their earlier childhoods, the children identified that systems would need more regular, up to date data in order for them to be correctly represented.

"I think I use AI at the kebab shop, the special one, when I am on my phone, so I want to draw that on our map."

- MCP, age 10, Glasgow

"I think the AI system needs to gather more information, because it gathers information from when children are younger, but it needs to gather information from now [too]!"

- MCP, age 10, Edinburgh



Key elements of AI creation and use (identified through the children's statements on where they used AI most commonly and drawing on the expertise of The Alan Turing Institute) were introduced in subsequent Mission activities. These included prediction in AI systems, data collection and input, fairness and bias in the results of system use, and creation of new systems.

"We've done a lot of new things and learnt a lot so I feel, like, 'wow'. I didn't know a lot about robots and AI before."

- MCP, age 11, Stirling

"Yeah, I'm feeling positive about Al. I am excited to learn more because I am not sure about it, I think it is on my phone.

I want to learn more about the inner workings of it."

- MCP, age 8, Shetland

"I feel great that I am learning about Al now because then I can teach other people about it too."

- MCP, age 10, Glasgow

#### 2. Children's views on Al now

- What are children's current opinions and perceptions of AI? How do these adapt, strengthen or change as they learn more about the subject?
- How do children feel about the ways in which AI may be used to inform decisions about their lives (e.g. access to services)?

#### What we did

As the children grew in confidence in their knowledge of what AI is and where they use it, we explored activities with the children that enabled them to conceptualise what AI systems can do and how they work, including how data is used. This included exploring creative concepts of AI systems the children might want to build, as well as sharing real-life examples with them of AI systems

that are used in everyday life. This was done through writing a series of short stories of children encountering AI in their lives at home, school, and in their community. The children also interviewed our expert partners at The Alan Turing Institute to ask them further questions about the real-life uses of AI.

#### What we found

In our initial AI Team survey, 78 of the 87 children responded. 60 of the these children shared positive feelings about taking part in the project and the opportunity to learn about AI and contribute their ideas. There was a wide spread of confidence (from 'I do not feel...' to 'I feel very...') in the statement 'I feel healthy, happy and safe when I use artificial intelligence', but 61 of the children who responded said they knew an adult they could talk to if they felt unhappy or unsafe in relation to AI, suggesting a lack of certainty at this stage about any risks that AI might pose but a confidence in the adults around the children.

"I feel amazing and I want to learn how to make Artificial Intelligence."

- MCP, age 10, Glasgow

"I feel OK when I use technology, but I need to find out more about it."

- MCP, age 9, Shetland



During our online Investigator sessions, our partners at The Alan Turing Institute introduced examples of real-life AI use in children's lives: we discussed how AI systems are being used as an assessment aide in schools, their use in medical diagnostics, and the police's use of facial recognition systems, for example. We also built imaginary model AI systems together; designing an AI system that predicted what playground equipment would be needed, based on data the children gathered at each school.

This led to further sessions exploring the fairness of data input to create and use AI systems in real life examples from children's lives. The AI Team created 'News Reports' and interviewed AI experts at The Alan Turing Institute, asking them questions about the impact of AI use on children's lives that they felt were important to them.

"We need to spend more time in a place to collect information about it and make sure we know what we are working with. We also need to talk to lots of different children at different ages."

- MCP, age 10, Edinburgh

"We want our Al playground predictor to predict if children have disabilities and need different playground equipment to play with so it is fair."

- MCP, age 10, Edinburgh

Children wanted to learn about how AI can be fair, or unfair, to children. This ranged from fairness in data collection to the fairness of outcomes decided by an AI system, rather than a human. "I think [AI]'s pretty good, although it cannot understand things that might be helpful sometimes... it ended up that we could use it until we had to make decisions ourselves that would make it usable."

- MCP, age 8, Shetland

"Children have the right to feel safe online, but sometimes companies can do something to try to make you spend money with and that's not safe for children online who don't know about it."

- MCP, age 8, Shetland

While children were excited about the uses of AI to improve lives, they remained highly concerned about risks associated with AI systems creating outcomes without sufficient human oversight. This was especially relevant in the context of online AI use, where a child may not be able to identify who is operating it or gathering data.

"Children have a right to privacy too, and maybe sometimes you don't know who owns things online. If you put your information into a system that might be creepy and you can't get it back."

- Investigator, age 10, Edinburgh

However, they saw the positive impacts of AI around issues of specific concern for children. For example, we introduced AI to the children that can be used to clean up environmental waste.

"[On a scale of less important to very important] it is quite important to me that AI is used to plant more trees because the environment is being harmed right now."

- Investigator, age 10, Glasgow

Overall, children felt strongly that they should learn about how AI systems are created, including what data is gathered by adults and from who. With this knowledge children tell us they will be empowered to share how Artificial Intelligence impacts children's human rights, and then be more able to participate in conversations around creative ideas for new, better systems.

#### 3. Children's views on AI in the future

- How would children like AI to be used in the future?
- What do children think are the conditions that need to be met for uses of AI to be acceptable and to be of benefit to children or wider society?
- What do children think are the limits to how AI should be used in the future?

#### What we did

Recognising the passion the children shared for being engaged in this topic, in our last Investigator online sessions we began to explore children's ideas for how AI should be used and created in the future. We drew a thermometer for the children to write or draw their ideas for future AI use. The children prioritised their ideas on a temperature scale of "burning hot", or very important, to "cooler" and so less urgent.



As they looked to the future, the Investigators continued to make connections between children's human rights and their relationships with Artificial Intelligence; they talked about their education, their healthcare and

friendships in online entertainment. They placed children's human rights and feeling safe when using AI, as well as the right of children to participate in AI creation, as the most "burning hot" issues for them.

#### What we found

In our first AI Team survey, we found that despite children sharing that they did not know much about Artificial Intelligence, they were confident in their knowledge of children's human rights. With exploration we found that this included a sense of AI having the potential to infringe upon, or positively impact, their rights. Most shared that they were interested in learning more about children's human rights and artificial intelligence.

As such, the children felt that AI should be used in the future to help children. In their imagined AI systems created for Mission 3, they wanted their playgrounds to support the play of younger children and children of all abilities.

"You can find AI in apps and devices, and if children don't know about it, then they could use an app that isn't safe for their age."

- Investigator, age 10, Glasgow

"When the AI made decisions because there were more older kids using the playground, it made it unfair because then more and more it was only the older kids who got to have what they wanted and because it was an AI the younger kids couldn't choose.

- MCP, age 10, Stirling



Recognising that AI systems operate on the basis of existing trends in data, the children also wanted to ensure that many children from different backgrounds would be consulted when data was gathered to create new systems. They saw this as necessary to make sure that the outcomes were equitable for all children.

"I know that I use AI on Face ID but what if it doesn't recognise my face when I get older?"

- MCP, age 9, Shetland

"I don't think it's fair for children to experience bias. If only white children who are boys have their data taken for new AI systems, then the AI won't recognise other children, and that might make them feel left out."

- MCP, age 10, Shetland

Children felt that they should be consulted on data collection, and the creation and use of AI systems. This included the impact of AI on their parents and communities; they shared worries that if AI negatively affected the adults who cared for them, then children would be impacted too. This included the ways that adults access and share AI with children.

"Al might take over jobs that normal humans would usually do, and they would lose their jobs, and it would be a pickle for them to try to get a new one."

- MCP, age 10, Shetland

"I really like Roblox so I do use AI, but I know that my mum works lots of jobs so she can get me a new phone so I can play it with my friends. If she didn't work then I would not be able to relax and play online with my friends, but I feel sad about her working that much."

- MCP, age 10, Stirling

"I like to make Youtube videos but my dad doesn't always know how to help me put them online with the right privacy settings."

- MCP, age 8, Shetland

"If the police don't know the bad parts of AI, they can't stop bias from happening when they use facial recognition."

- MCP, age 9, Shetland

Overall, the children felt that for AI systems to be fair and serve the needs of all children, then it was important that a wide range of children were consulted. They also shared their understanding of barriers that adults might face in accessing AI, whether they be financial or knowledge-based, and the implications that this had for them as children. It was important to the MCPs that the adults in their lives understood AI in order to support them to be healthy, happy and safe.

"It is important for all children and adults to know about Al because Al can protect children." - MCP, age 10, Stirling



Children also shared concerns over decisions made by AI systems that could not be changed after they had happened. While the positive uses of AI tended to be what the children focussed on, one survey respondent and children in our inperson workshops also expressed concern over the potential for AI to make decisions without human input in the future.

"It is important for children to know about AI because it can help people learn new things in the future like baking, or help them get jobs." - MCP, age 10, Stirling

"Al could go out of control, which makes me feel unsafe. I also don't know who is behind the camera when I am playing online games and I don't know what adult to ask about that."

- MCP, age 10, Stirling

"It is important for children to know about artificial intelligence because when they are older they might use a lot of it because more of it will come and it's so good because you can chat to friends and play games."

- MCP, age 9, Edinburgh

"I feel like they should only be able to make more decisions that would help you - your life. Because if they make a mistake, that could go very wrong."

- MCP, age 10, Edinburgh

## 4. What we have learned: the impact of children's participation

- Do children feel like they have a say in how AI is being used?
- How do children want to be involved in decision-making about future uses of Al?

#### What we did

As we neared the end of the first Stage of the project, we began to explore with the children what the future of AI might look like with their involvement. Mission 5 focussed on imagining ways in which AI systems might be developed that supported children's human rights, and our final sessions were focussed on four themes to be explored in greater depth in Stage 2. A key learning point for the adults involved is that AI is a complex subject which requires a good deal of time and thought to explore successfully with children.

Throughout Stage 1, we have trialled and modelled creative ways of engaging children in consulting about AI. The children's enjoyment of the Sessions and Missions is testament to the impact of a rights based approach; the children felt valued, listened to and that their views were important. The depth of insight into children's views and understanding of how AI impacts their lives is of clear value to the wider field. The Investigators' appearance at the Scottish AI Summit provided an opportunity to demonstrate this publicly.

The Investigators chose whether they wanted to take leading roles in either the workshop or the plenary session and then prepared their own input. In the workshop, they shared information about children's human rights with adult attendees and chaired a discussion on how these rights might interact with AI. In the plenary, the children presented a report on the project so far in the form of a news broadcast, including interviews with Children's Parliament and The Alan Turing Institute.

Over 400 researchers, creators, and decision makers working with Al came together at the Summit to share new ideas and practice in the field. Adult attendance at the workshop far exceeded the 20 places we had suggested, and the main auditorium was packed for the plenary. This level of interest from adults operating in the sector was an acknowledgement of the important, and necessary role that children play in the future of Al systems.

"Thank you [the children] for delivering such an amazing and thought-provoking session. It gave me insight into children's human rights, an area I had not considered before in developing AI technology."

- Adult attendee, Scottish Al Summit

"It was so exciting getting to talk to the adults today. I have been very anxious and shy before, but today I felt proud of myself for saying what I wanted to in front of everyone. They listened to me."

- MCP, age 10, Glasgow

We organised a residential outside Glasgow around participation at The Summit. After all their months of working together, this was the first time the 13 ten year-old Investigators had been able to meet in person. For some, it was also their first time on an aeroplane. We incorporated visits to an alpaca farm, frisbee games and downtime with mascot Max. Underpinning the enjoyable parts of the residential was our hope that the children would build relationships together. Through our days of team building, preparation for the Summit and fun activities, they quickly formed into a strong and mutually supportive team.

"It made me feel happy, safe and looked out for that the other children made signs for me and showed me around when I got to [the residential.] Everyone included me and I felt happy."

- MCP, age 10, Shetland



#### What we found

During the Missions and Investigator sessions, when asked directly about whether they felt they had a say or how they would like to be involved, the children either referenced the current project or expressed uncertainty. The children had lots of ideas for ways in which AI might be used to support their rights and were passionate in their belief that it should be used fairly, as outlined above. They were also clear that they thought there were benefits to children learning about AI; for example,

in order to make sure they could use AI safely and to enable them to gain jobs in related fields when they were older. However, what was less clear to them was what meaningful participation in AI development might look like. This has been an important discovery in terms of steering the next stages of the project; there is clearly more work to be done with the children to explore what engagement with the wider AI field should look like as outlined earlier in this report.

"Also kids would use it ..., and also it would give chances for people to get jobs that are like coding and things so they can actually help AI to get better and make sure it's more safe and less things that it could be used for evil."

- MCP, age 10, Edinburgh

"So a kid could go up to a person, you know, about AI, like a human adult, and then they'd be like, maybe, like, did you know that AI can be used in bad ways?"

- MCP, age 10, Edinburgh

"They should be talking to children about it so, so they can learn it, and so they can, even if they're not adults, you can, they can start controlling their own AI thing."

- MCP, age 10, Edinburgh

Regarding children's participation at the AI Summit, we were struck by how notable it was to have children present in the space. Many of the adults attending the workshop and plenary shared how new, and exciting, it was to hear from children – in person- about their passion for, and ideas around, Artificial Intelligence.



Photograph by Roberto Ricciuti

'Thank you for sharing your ideas with the adults here. I hope more people will think about children's rights when they are designing AI now. You answered so many difficult and emotional questions on AI and have inspired me to make sure that in my work, I involve many different children in planning my research."

- Adult attendee, Scottish Al Summit

"The [children's] session has made me think about the role of AI when I use it as an educator, but also as an adult that I need to enforce and protect children's rights."

- Adult attendee, Scottish Al Summit

"A change I can make [after today]...[is to] ensure that children are always at the heart of our engagement and consideration of information rights."

- Adult attendee, Scottish Al Summit

"The [children's] session has made me think about emotional connections we can develop with each other while using AI."

- Adult attendee, Scottish Al Summit

The impact of including a diverse range of voices across rural, urban and island communities is already emerging. The experiences that children have in relation to AI can vary depending on their environment:

"My favourite moment from this weekend was meeting everyone in person and having them show me ar<mark>ound. I was very nervous and felt worried when</mark> I realised people from my school might see this online, but everyone said I was brave and I didn't even feel nervous when I started talking in front of the adults."

- MCP, age 10, Stirling

"On the first night, I was so excited I almost couldn't sleep. I was also worried that I might find the weekend boring or hard. But I felt listened to by Children's Parliament and we got to have fun and that made me feel like I wanted to talk to adults about my ideas at the Summit."

- MCP, age 9, Edinburgh

"Al helps me play and stay in touch with my friends if we can't go to the mainland or if I have to stay home from school and in the holidays."

- MCP, age 10, Shetland

"I don't think life on the island is that different for children than on the mainland, but I really like where we stay and the nature we can see here. So I think it is important that children here

- MCP, age 10, Shetland

have a say, because we do know Shetland best."

Children have the right to an education; to play and relax; and to have a say on issues which affect them. Ensuring children's participation in intergenerational activities and influencing platforms such as the AI summit, are important to realising their rights. The children shared that they would like to see more children involved in AI education and influencing across age groups and opportunities.

"Smaller children might not get included if AI is only with one age group of children. Also, children change every year, I am not the same like in P5. So, children need to have their say every year, or even more often."

- MCP, age 10, Stirling

Photograph by Roberto Ricciuti





## Reflections from The Alan Turing Institute

Al is increasingly part of children's dayto-day lives with impacts often realised only in retrospect. Exploring the ways in which children understand, experience, and engage with Al could provide muchneeded guidance for policymakers, Al developers, and affected stakeholders to inform future approaches to childcentred Al.

As part of this project, we travelled up and around Scotland to meet and work with all 87 children from the AI team: teaching them about children's rights and AI but, more importantly, learning about what matters to them in this domain. Meeting the children brought the project to life as we continued our collaborative engagement with Children's Parliament through online workshops and developing Missions to ensure that the AI team were represented throughout our project. It was an insightful experience working with the Investigators over 6 online workshops held between November '22 - February '23. Each workshop focused on a different theme of children's rights and AI with children sharing their thoughts on bias, fairness, where AI may be used in their day to day lives, and how AI may be better developed to uphold children's rights. The children quickly grasped difficult concepts like how algorithms are used in prediction, recommendation, and classification.

In an additional set of four online sessions, the children had the opportunity to ask questions based on real-world AI case-studies. Once again, we were impressed with the kind of questions asked, such as limitations of facial recognition for identical twins and improving training data to reduce bias. One case study focused on Al in healthcare where children expressed concerns about accessibility and asked how AI devices can be designed to be more accessible for the elderly and younger individuals. Children explicitly mentioned their 'right to privacy' and asked, 'how fair is it for companies to collect information [data] about children?'. Other children said, 'a lot of games try and get children to spend money' and wanted to learn about how to better safeguard themselves online. Children also showed empathetic considerations pointing to the digital divide and asked. 'is it fair that some children do not have access to Al [devices]?'.

To mark the end of this phase of our project, we joined the AI Investigators in presenting our work so far at the Scottish AI Summit held in Glasgow towards the end of March 2023. Culminating with both a children's rights workshop and plenary session at the Summit, the Investigators had an opportunity to share their thoughts and perspectives with a wide range of stakeholders working across AI,

from researchers and developers to policymakers and designers. It was a joy planning, supporting, and presenting with the Al Investigators for this big moment and for them to be able to share what they learnt as part of this project. For us, it was a great privilege to join them on stage as they showcased not only our work but also drove home why they believe that meaningful engagement with children as part of Al design, development, deployment, and policymaking is important. The reflection session with the children after their Summit presentations was heartwarming, as they expressed their emotions; from being nervous at the beginning, to feeling proud of what they had achieved individually and collectively.

The adult audience members who attended the Summit were captivated by the children. Throughout the Summit, we had members of the AI community come up to us to learn more about the project and express their awe of the AI Investigators and their work. Following

up on those discussions, we are currently expanding the impact of our project and in continuous conversations with individuals and organisations to find new synergies that bolster the importance of considering children's rights and AI.

With this research, the case for children to be included as a key stakeholder group and be meaningfully involved in the development of child-centred AI will be further strengthened and help to ensure their voices are heard.

As the project moves to the next phase, we look forward to continuing our collaboration, working with the AI team and furthering the development of child-centred AI. The Exploring Children's Rights and AI project represents a key pillar of our research within the Public Policy Programme at The Alan Turing Institute and we are excited about extending this work not only as part of Scotland's AI Strategy but also to co-create leading AI policy and research that positively impacts children across the globe.

**Janis, Sabeehah, Mhairi,** and **Morgan** The Alan Turing Institute April 2023



## Emerging themes and next steps

From all that the children told us in Stage 1 of this project, four distinct themes emerged:

- Al and Education
- Fairness and Bias
- Safety and Security
- The Future of Al.

#### 1. Al and Education

Learning about AI: The children consistently told us that it was important that children learn about Artificial Intelligence. They did not think it was taught outwith projects like this and felt that learning about AI would equip them better both now and in the future. It was also a steep learning curve for both the children and the adults who did not work in the field; as some of the concepts were challenging to grapple with.

"We were getting confused between technology and Artificial Intelligence."

- MCP, age 10, Stirling

"I knew a wee bit of Al because of my sister."

- MCP, age 10, Glasgow

"It's good to know about Al so we don't get scammed." - MCP, age 10, Glasgow The use of Al in Education: The children had mixed feelings about how Al is, and could be, used in schools. They felt it could be very useful, but also worried about what might happen if it was relied on too heavily. Some children expressed concerns that programmes which dictate the level of challenge that children experience in reading or maths activities has the potential to be unfair or to limit opportunities, while others felt that important human interaction or fairness were at risk.

"If you're doing homework, then you shouldn't use it because you're supposed to be doing that by yourself, not by Al."

MCP, age 9, Shetland

"If AI was teaching most of the people in schools and like all that, then they wouldn't actually get much opportunity to hear an actual person saying it; it would just be, like, a robot saying all their subjects all the time. And it would probably be a bit frustrating because the robots know everything, and the teachers learn new things through the children."

MCP, age 10, Shetland

#### 2. Fairness and Bias

The children, having learnt about AI through the project, now have a solid understanding of the principle that the quantity and quality of data that is inputted into an AI system will impact how accurate or effective it is. They were very concerned to hear about the potential for AI systems to replicate existing bias in society and felt strongly that it should not be used for anything that would lead to discrimination.

"Sometimes AI can go wrong where it can go maybe like sometimes racist or even just give you the wrong stuff."

- MCP, age 10, Glasgow

"[An Al system] keeps on making the same mistake until you teach that how to go better and get around a mistake."

- MCP, age 11, Stirling

"Top tip for the Al system: have up to date information; check what happened last year."

- MCP, age 10, Edinburgh

#### 3. Safety and Security

The children want AI to help to keep them safe, both online and off – in their schools, homes and communities. They were aware of some of the risks of navigating the internet, with many children referencing 'scammers' throughout the project, and hoped that Al could be used to mitigate against these risks. The children also spoke about Al's use in advertising and gaming and the importance of children understanding how those systems worked. They felt that it was important that children's privacy was protected. They were also excited about the potential for Al to help protect the environment, and to protect children from harm in the wider world.

"There's also some issues like there could be companies getting information about you and making it more tempting to do stuff like spending money and it's not going to be good for children because they might spend money accidentally."

- MCP, age 10, Shetland

"I think [AI]'s doing really well and it's helping the planet."

- MCP, age 11, Stirling

"It could recognise criminals, but it could also recognise people who weren't criminals. So if we trained it not to look at people who weren't criminals, the people could have a better life."

- MCP, age 10, Stirling

#### 4. The Future of Al

Future possibilities - AI in our homes, schools and communities When considering how AI might be used in the future, the children were full of creative ideas for how it might be utilised to help to keep children healthy, happy and safe. They were optimistic about its potential, while also being wary of the risk of it being misused.

"You could use AI to recognise different species that humans couldn't recognise."

- MCP, age 10, Edinburgh

"There's things it shouldn't be used for like military and police. Any fighting kinda thing it shouldn't be used for."

- MCP, age 9, Glasgow

#### Children's rights and participation in AI development

When asked, the children were also near-unanimous in the view that for AI to serve their needs, they needed to be involved in making decisions about how AI is made and used. They saw themselves as having an important contribution to make.

The children thoroughly enjoyed working alongside adults with AI expertise. The relationships built between MCPs and adults from The Alan Turing Institute provides an excellent model for how successful collaboration and consultation might work in this field in the future.

"[If children were listened to] there'd probably be a lot more stuff because there's still a lot of children that would want to be into that stuff. ... [Adults should] do more stuff like what you are doing and let children know that AI is a thing, and not just keep it to themselves."

- MCP, Shetland, age 10

"I loved The Alan Turing Institute!"
- MCP, age 10, Edinburgh

It is vital that children participate in the shaping, implementation, and regulation of Artificial Intelligence in Scotland's future, but this must come from the approach of furthering children's human rights. There is a need for diverse, intergenerational input, from the creation of new ideas to decisions made on their implementation and use. Nothing from what we have uncovered so far suggests that these opportunities currently exist in Scotland.

Stage 2 of the project will run from April 2023 to March 2024. During this stage, working in partnership with the Scottish AI Alliance, our approach will be structured by the four themes outlined above. Working alongside a range of 'guest experts' in various adjacent fields, the children will explore each theme in greater depth. Using the same hybrid Investigator model as Stage 1, the children will alternate between online sessions (with a new cohort of Investigators) and wider engagement with The AI Team.

While working alongside professionals working in AI research, policy and/or development, Children's Parliament will also be devising and modelling

ways of consulting with children on matters relating to AI and children's human rights. In having access to these Al and children's rights experts, the children will have the opportunity to strengthen their understanding of Al development and use, and so become better advocates for children's human rights in this area. In having access to The AI Team, the adults from the Scottish Al Alliance will have the opportunity to experience first-hand the value of involving children in their work - both in terms of ensuring Al systems are serving children's needs, and in promoting an equitable and democratic Al landscape in Scotland. Throughout the stage, through our partnership with SAIA, evidence will be gathered to feed into Scotland's Al Strategy.

Our hope for the legacy of the project, which will be the focus of the third and final stage, is that meaningful children's participation is embedded in AI policy and development across Scotland. It is vitally important that if AI is to support children to be healthy, happy and safe, that children themselves are listened to and that their views and experiences are used to guide how AI is developed and what it is used for.



## Thank you

We would like to say a huge thank you to all the children and adults who have taken part in this project so far. The wonderful Members of Children's Parliament from across Scotland have thrown themselves into the project with enthusiasm, interest, humour, creativity and passion. Likewise, we owe a huge debt of gratitude to the tireless work of school staff in supporting the children's engagement and to the families of the children for helping their children to thrive.

We would like to pay special thanks to our 13 incredible Investigators. The work involved in this project has not been easy – especially given the complexity of AI as a subject matter – but the children have shown endless dedication and curiosity. Getting to know the children over the course of the project has been a joy. It has been a genuine pleasure to see them grow in knowledge, skills, and confidence, and we felt immense pride watching them present so articulately, and with such candour, at the Scottish AI Summit.

The 87 members of The AI Team also deserve special praise. Their work in their monthly Missions has been the foundation for everything else that we've done – we thank them so much for their creativity, thoughtful responses, laughter and hard work. We hope they will also be incredibly proud of the contribution they've made and are as excited as we are to start work on the next stage.

Thank you to the staff of our four partner schools: Oakwood Primary, Doune Primary, St Mary's RC Primary,

and Dunrossness Primary. The commitment of the staff in each school has been a huge asset to the project; from last-minute tech support, right through to leading the facilitation of Missions and, in one instance, creating AI-generated animations of the children's illustrations completely unprompted by us! Their support of the children and enthusiasm for the project has been a huge driver of its successes so far.

To the two members of staff who accompanied the children from Shetland down to Glasgow for the residential and AI Summit, we would also like to give special thanks – their willingness to throw themselves into the work in all sorts of ways made those days so much easier and more enjoyable for all.

The Scottish AI Alliance have provided invaluable behind-the-scenes support and engagement right from the project's inception. The work done by SAIA to produce the Scottish AI Summit and help to facilitate the children's amazing contributions was incredible.

Finally, working so closely with The Alan Turing Institute has been a wonderful, shared experience. The team's knowledge and patience in explaining difficult concepts to both the children and ourselves made the work possible, while their passion, kindness, and willingness to be silly made them a big hit with our MCPs.

#### **About Children's Parliament**

Established in 1996, Children's Parliament is dedicated to the realisation of children's human rights in Scotland. Our dream is that children grow up in a world of love, happiness and understanding. Our mission is to inspire greater awareness and understanding of the power of children's human rights and to support implementation of the United Nations Convention on the Rights of the Child (UNCRC).

Through our rights-based practice we provide children up to 14 years of age with opportunities to share their views, experiences, and ideas so that they can influence positive change in their lives at home, in school and in the community.

We use creative, participatory and play-based methods to support children to meaningfully engage in decisions that affect them. We support children to influence policy, practice and legislation, and we build the capacity and win the hearts and minds of adults to realise children's rights.

For more information, please visit www.childrensparliament.org.uk

#### **About The Alan Turing Institute**

The Alan Turing Institute is the UK's national institute for data science and artificial intelligence. Researchers at The Alan Turing Institute were involved in a Policy Pilot Partnership with UNICEF in 2020-21, in which they investigated public sector organisations' thoughts and opinions on child-centred Al. The research team piloted UNICEF's

Draft Policy Guidance on Children and AI alongside their existing guidance Understanding Artificial Intelligence Ethics and Safety. They are now seeking to complement this research by engaging with children and young people to inform future approaches to child-centred AI.

#### About the Scottish Al Alliance

Scotland's national Artificial Intelligence (AI) Strategy was launched in March 2021 and set out a vision for Scotland to become a leader in the development and use of trustworthy, ethical and inclusive AI.

The Scottish AI Alliance is tasked with the delivery of the vision outlined in Scotland's AI Strategy in an open, transparent and collaborative way. It provides a focus for dialogue, collaboration and, above all, action on all things AI in Scotland. The Scottish AI Alliance is a partnership between The

Data Lab and the Scottish Government and is led by a Minister-appointed Chair and overseen by Senior Responsible Officers from The Data Lab (CEO) and the Scottish Government (CDO). Its activities are overseen by a Leadership Group with representation across society and working groups are convened as and when appropriate for specific projects and programmes from across Scotland's Al community.

#### www.scottishai.com

#### **Unfearties**

Unfearties are individuals who are courageous in discussing children's issues, are making a difference in children's lives, and who are willing to speak up for, and stand alongside, children. This Children's Parliament initiative has attracted more than 1,000 people to join, including doctors, nurses, teachers, parents, carers, civil servants, local authority

workers, third sector practitioners, United Nations deputy high commissioners, and even the First Minister of Scotland.

Visit **childrensparliament.org.uk/unfearties** to find out more and join the brave band of Unfearties!





The Alan Turing Institute

www.childrensparliament.org.uk ©Children's Parliament 2023