Section 1.8

Public engagement

Public engagement

The world's first 3D printed steel bridge was opened by Queen Máxima of the Netherlands in Amsterdam in July 2021

3D printed bridge opens to the public

The Turing now has a presence in the heart of Amsterdam, thanks to the world's first 3D printed steel bridge, which **opened to the public in July 2021**. As well as demonstrating the potential of this innovative construction process, the bridge is also equipped with about 100 sensors that measure the bridge's load and how the structure vibrates and subtly bends and tilts as people cross it.

The Turing teamed up with the bridge's builders MX3D and US software company Autodesk to develop a digital twin for the bridge – a computer model that will use the bridge's sensor data to monitor the structure in real time. The digital twin could be used by engineers to analyse how the steel is behaving, providing early information about any maintenance needs, as well as important insights into how 3D printed steel might be used for more complex building projects. The bridge's launch was covered extensively in the popular press, including **New Scientist**, **BBC Newsround** and **MailOnline**.

13 Turing Podcast episodes published this year, totalling 15,800 downloads

12 Public events held this year, reaching over 12,000 people

43 Researchers trained in public engagement skills

Data science and AI glossary

In September 2021, we launched our jargon-free **data science and AI glossary** – a resource aimed at non-specialists who want to find out more about these topics without having to navigate the technical language. We hope to: lead the conversation around these topics and counter misinformation; provide clarity to the terms that people hear in everyday life (e.g. 'algorithm', 'deepfake', 'robot'); and introduce people to new concepts (e.g. 'neural network', 'synthetic data', 'digital twin'). We are also hoping that it will be a useful resource for journalists and policy makers, as well as researchers in areas that intersect with data science and AI. The world of data science and AI is ever-changing, so we will be regularly reviewing the glossary and adding new terms to the list.

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In the media

Turing researchers and their projects have continued to appear across TV, radio, podcast and news media this year. It was an especially busy year for **Andrea Baronchelli**, the Turing's Token Economy Theme Lead, whose work on mapping out the NFT marketplace led to numerous media appearances, including BBC News, **Wired**, BBC Radio 4's *Money Box*, **Vice** and **NBC News**. This followed a blog he wrote for our website – '**Non-fungible tokens: can we predict the price they'll sell for?**' – which was our most viewed of the year.
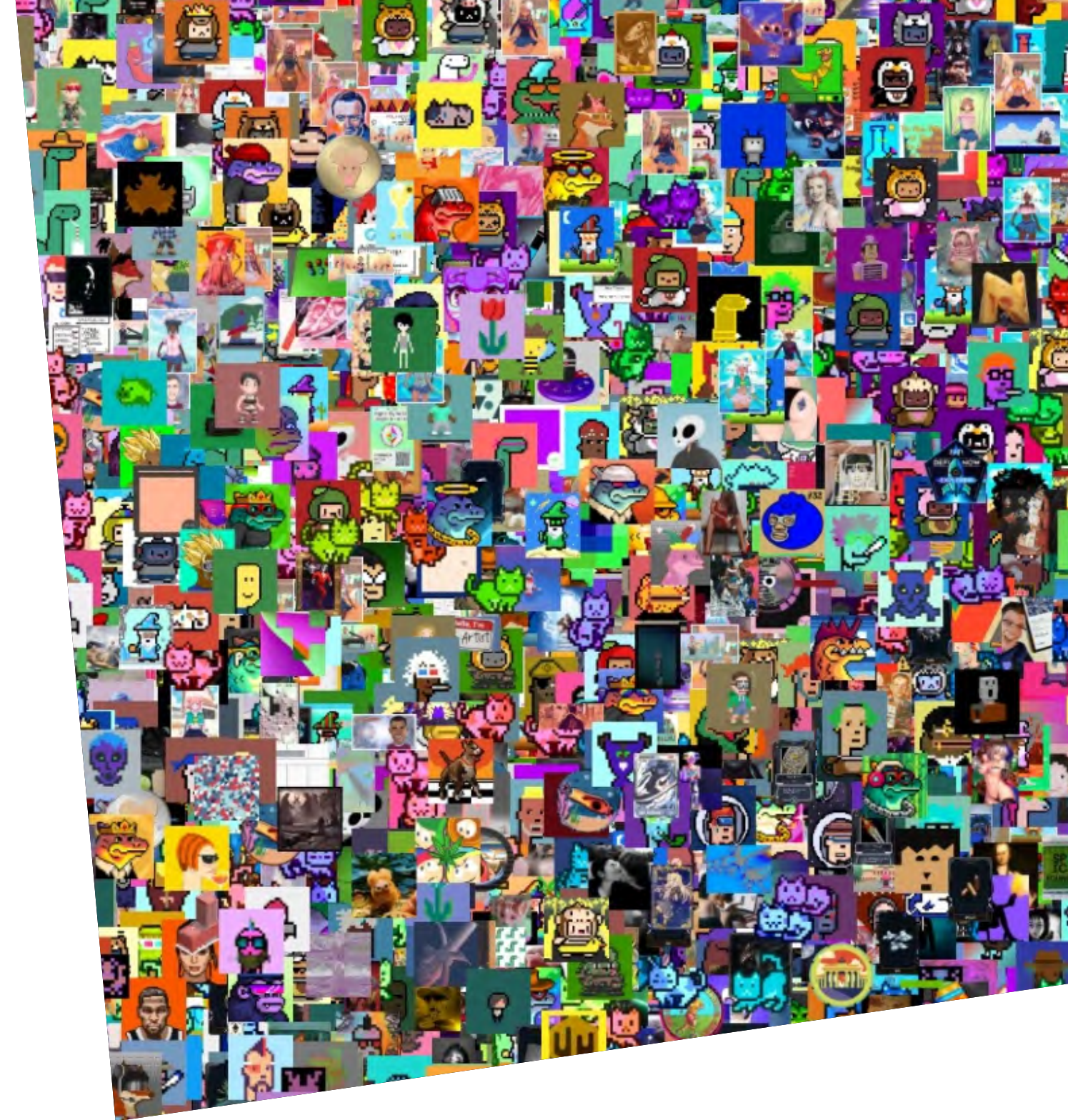
Another highlight was the story of an AI system that promises to diagnose dementia after a single brain scan, developed by a team led by **Zoe Kourtzi**, Turing University Lead at the University of Cambridge. The research, which could allow patients to receive a diagnosis and preventative treatment years before developing symptoms, received extensive coverage via outlets including **BBC News**, BBC Breakfast TV, **The Times**, **MSN** and US public radio.

Finally, our new Chief Scientist, Mark Girolami, kick-started his role with a series of high-profile media appearances, including **Engineering & Technology magazine**, **Forbes** and **Research Professional**.

The Turing at COP26

In autumn 2021, the Turing attended COP26 – the UN climate change conference in Glasgow. Our researchers at the conference included **Gavin Shaddick** (Turing Fellow and Chair of Data Science & Statistics at the University of Exeter) who presented his work exploring the intersections between AI and climate, on projects including '**Impacts of climate change and heat on health**', and the '**Climate impacts, mitigation, adaption and resilience' (CLIMAR) framework**. To coincide with the opening of the conference, Gavin also wrote a public-facing blog for us on the **crucial role for AI in tackling climate change**.

The Turing was also represented at COP26 by **Heather Selley**, a Turing Enrichment student at the University of Leeds whose PhD research involves analysing satellite imagery to monitor changes in Antarctic ice. On the eve of the event, she made **national news** when she named nine fast-flowing glaciers in West Antarctica – including 'Glasgow Glacier'. Heather presented her research to COP26 delegates in the Cryosphere Pavilion, and also appeared at the Space4Climate stand in the Green Zone to talk with the public about the importance of satellite data in measuring the impacts of climate change.

Andrea Baronchelli's blog on NFTs was our most viewed of the year

We were delighted to host one of Stuart Russell's BBC Reith Lectures in December 2021

Hosting a Reith Lecture

Every year since 1948, BBC radio has broadcast the Reith Lectures, giving a national platform to leading figures of the day. This year's lecturer was Stuart Russell, an AI expert who is professor of computer science at the University of California, Berkeley. We were delighted at the Turing to host **the first of Stuart's four lectures**, which were listened to by over a million people. Broadcast on BBC Radio 4 and the BBC World Service in December 2021, his lecture at the Turing traced the story of AI back to Aristotle and looked towards the future, arguing that the arrival of AI is the biggest event in human history. **Listen to the lecture** on BBC Sounds.

Exploring young people's attitudes to AI

In February 2022, the Turing worked with the British Science Association's **Future Forums** initiative to gather the opinions of 14- to 18-year-olds on AI. This involved a survey of 2,000 young people, plus four in-person workshops, each with two Turing researchers and ten participants. The aim of this project was to give young people in the UK an opportunity to air their views on how AI is used in society, and which AI applications they would like to see investment in (mental health and climate change were the most popular options). In turn, we were able to directly connect with this underrepresented group, giving us insights into the AI-related issues that matter most to young people. About one-quarter of workshop participants said that they were previously unaware of AI's presence in their daily lives, which demonstrates the need for further educational outreach in this space.

Exploring Alan Turing's legacy

On 23 June 2021, on the 109th anniversary of Alan Turing's birth, the UK's new £50 banknote was launched, featuring a portrait of Turing alongside his quote about early computers: "This is only a foretaste of what is to come and only the shadow of what is going to be". In the run-up to the occasion, we held a free virtual, public event: '**Breaking the code: Alan Turing's legacy in 2021**'.

In this engaging panel discussion, guests including Sir Dermot Turing (author and nephew of Alan Turing), Sue Black (computer scientist and organiser of the Saving Bletchley Park campaign), Clara Barker (material scientist and LGBTQ+ campaigner) and Shakir Mohamed (research scientist at DeepMind) explained why Alan Turing means so much to them, and how his life and work can inspire positive changes in STEM today. **Watch the event**.