



THE UNIVERSITY  
*of* EDINBURGH

# GENERATIVE AI LABORATORY

ANNUAL REPORT  
2024/25





# Contents

<b>Foreword</b>	.....	<b>1</b>
<b>Leadership and Professional Services Team</b>	.....	<b>2</b>
Appointment of GAIL Leadership Team	.....	2
Appointment of GAIL Professional Services Team	.....	2
Appointment of GAIL Affiliates	.....	2
<b>Fellows</b>	.....	<b>3</b>
Appointment of GAIL Fellows	.....	3
Appointment of GAIL Entrepreneurial and Innovation Fellow	.....	3
<b>Events</b>	.....	<b>4-5</b>
GAIL Seminar Series	.....	4
Sponsored Events	.....	5
<b>Seed Funding</b>	.....	<b>6-7</b>
1st Round/ 2nd Round	.....	6
Generative Creative Visions Workshop	.....	7
Beyond Deepfakes Workshop	.....	7
<b>PR and Communications</b>	.....	<b>8</b>
Establishing GAIL's Public Voice	.....	8
<b>London AI Showcase</b>	.....	<b>9</b>
<b>Business Development</b>	.....	<b>10</b>
Industry Engagement and Strategic Partnerships	.....	10
Executive Education Proposal	.....	10
Compute Resource	.....	10
<b>Conclusion</b>	.....	<b>11</b>



# Foreword

## Foreword from GAIL Leadership Team

**Welcome to the inaugural annual report of the Generative AI Laboratory (GAIL) at the University of Edinburgh. This year marks the completion of our first full year of operations, a year filled with expansion, innovation, and collaboration.**

The year began with the establishment of the interim leadership team and the appointment of critical members to the GAIL Professional Services Team. Working together, we have successfully guided GAIL through its foundational phase.

The establishment and recruitment of GAIL Fellows from 13 of 21 schools across all three colleges of the University underscored our commitment to a multidisciplinary approach. These appointments reflect our rich diversity in expertise, spanning areas from computer science and medicine to arts and engineering, thereby fostering a holistic research environment.

Our seminar series and other GAIL-associated events have been one of the key highlights of the year, bringing together leading minds from academia and industry to share cutting-edge insights into generative AI. These events not only spurred academic discourse, but have been instrumental in creating new collaborations in the field of generative AI research.

The launch of two rounds of seed funding helped create further engagement within the research community, enabling innovative projects that push the boundaries of generative AI applications.

As we look to the future, GAIL is poised to become a leading hub for generative AI research and translation, building on the University of Edinburgh's rich history of innovation and its strong track record in artificial intelligence.

By fostering collaboration across disciplines and with external partners, we aim to accelerate the development of generative AI solutions that can address complex societal challenges and drive economic growth.

This report highlights the significant progress we have made in our first year, and we are excited to continue this journey, exploring the vast potential of generative AI to transform society, improve lives, and shape a better future.



**Professor  
Jane Hillston**



**Professor  
Mirella Lapata**



**Professor  
Kev Dhaliwal**

Interim Co-Directors



THE UNIVERSITY of EDINBURGH  
Generative AI Laboratory



# Leadership and Professional Services Team

## GAIL Leadership Team

In 2024 an external recruitment agency, Aspen People, were engaged to assist with the recruitment of a Director of the Generative AI Laboratory (GAIL) and Chair in Generative Artificial Intelligence.

This recruitment process did not result in the successful recruitment of a Director.

To ensure that GAIL could grow in this pivotal year, three Co-Directors of GAIL were appointed:

- Professor Jane Hillston
- Professor Kev Dhaliwal
- Professor Mirella Lapata

They form an interim directorship team bringing together a broad area of expertise and insight from across the University.

## GAIL Professional Services Team

The GAIL professional services team support the compute, business development, communications and administrative functions of GAIL.

The following staff have been appointed during the year:

- **Kirsty Dillingham**  
Head of Business and Operations
- **Shane Canning**  
Head of Communications
- **Luna De Ferrari**  
Senior Research Officer
- **Gregor McElvogue**  
Business Development Executive
- **Euan Morse**  
Project Co-ordinator

# GAIL Affiliates

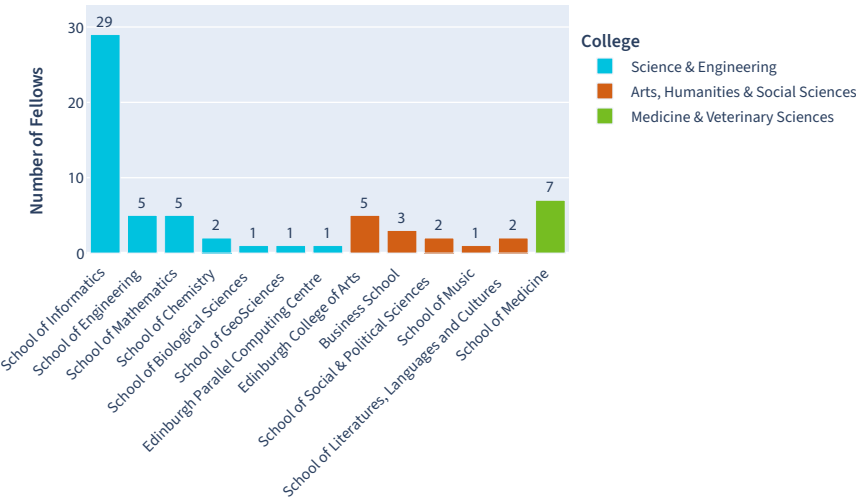
GAIL is developing a community of professional service staff interested in aspects of Generative AI from across the University. In March, GAIL appointed its first six affiliates with staff from Information Services Group and Human Resources.

# GAIL Fellows

GAIL Fellows have been appointed from across the University with representation from all three colleges, bringing together a diverse range of expertise from fields such as computer science, medicine, business, design, mathematics, chemistry and engineering.

## Distribution of GAIL Fellows Across Schools

A total of 68 Fellows have been appointed from 13 schools, and there are plans to grow this number further bringing in more disciplines and expertise.



The appointment of the GAIL Fellows marks a significant step in fostering a robust community centred around innovative generative AI research at the University of Edinburgh and has already resulted in several new collaborations.

## Appointment of GAIL Entrepreneurial and Innovation Fellow

In April 2025, GAIL appointed **Dr Yinhuan Dong** from the School of Engineering as its first Entrepreneurial and Innovation Fellow. This was a three-month secondment to build upon an existing piece of research or innovation in Generative AI to progress a tangible impact or commercialisation opportunity over the course of the fellowship.

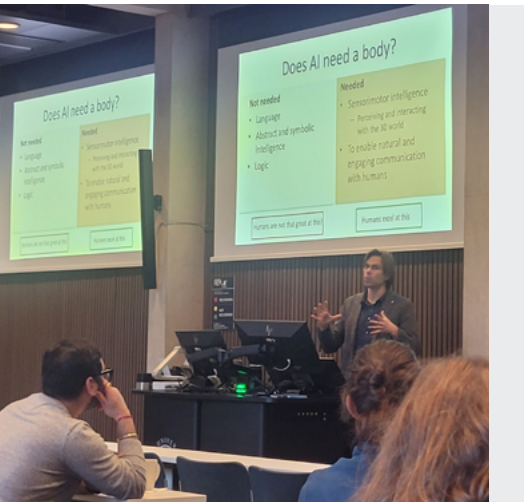
Dr Dong's project aims to develop cognitive health support based on Generative AI. He was mentored by Professor Kev Dhaliwal, GAIL interim co-director, and Professor Steven Drost, Codebase and Honorary Professor at University of Edinburgh Business School.



*“Being a GAIL Fellow has been enriching, broadening my understanding of generative AI and sparking new ideas. I’m grateful for the seed funding that’s allowed me to explore how AI can help us understand species’ responses to climate change. I feel fortunate to be part of GAIL’s vibrant research community.”*

**Dr Oisín Mac Aodha**  
GAIL Fellow and Reader at University of Edinburgh’s School of Informatics





# Events

## GAIL Seminar Series

Throughout the year GAIL has hosted a varied programme of seminars with invited external speakers from academia and industry providing a range of insights.

These events have been well attended by academics and researchers from across the University and generated some stimulating discussions.

●	November 2024	The first in the GAIL Seminar Series, “How and why should we learn avatars with sensorimotor capabilities” was delivered by Professor Gerard Pons-Moll from University of Tübingen.
●	December 2024	GAIL Fellow Lightning Talks. Newly appointed GAIL Fellows were given the opportunity to showcase their research through three-minute presentations. This was an opportunity to foster dialogue and collaboration across various disciplines with the Generative AI sphere.
●	January 2025	Dr Matthias Gallé from Cohere gave a seminar on the industrialization of Large Language Model training.
●	March 2025	Seminar delivered by Lydia Chilton from Columbia University where she discussed how Generative AI is helping to reshape the design lifecycle in programming.
●	April 2025	Dr Wouter Boomsma from University of Copenhagen gave a seminar on how Generative AI is helping to rapidly transforming the field of protein design.
●	May 2025	GAIL Fellow Lightning Talks Round 2
●	June 2025	Dr Christian Rupprecht, University of Oxford, explored the difficulty of representing all of Computer Vision in a “foundation model”.  Joint seminar with the Centre for Technomoral Futures (CTMF) in which Dr Alex Hanna , Director of Research at The Distributed AI Research Institute (DAIR) and Professor Shannon Vallor, Director of CTMF discussed the societal and political dynamics of AI and its effects on marginalized groups and ways to counteract these injustices.

## Sponsored Events

●	November 2024	Edinburgh AI Expo was organised by Edinburgh AI, a Special Interest Group of CompSoc, the Informatics student society and supported by funding from GAIL. <ul style="list-style-type: none"> <li>A total of 34 students demonstrated 17 projects. The Expo was the culmination of a programme of events delivered by students for students in the first semester of 2024/25. This included basic training in AI technologies, including LLMs, and independent guided technical skill acquisition.</li> <li>The Expo Day was hosted at the Informatics Forum and provided each team with the opportunity to pitch their project in competition, attracting more than 100 registered attendees.</li> </ul>
●	February 2025	The Doing AI Differently Edinburgh Workshop was co-sponsored by GAIL, an initiative led by The New Real (University of Edinburgh/The Alan Turing Institute) and Data-Centric Engineering (The Alan Turing Institute) with Arts and Humanities Research Council and partner institutions in the UK and North America.
●	April 2025	GAIL sponsored and had a marketing presence at the EuroProofNet workshop on Theorem Proving and Machine Learning in the age of LLM’s: SoA and Future Perspectives, held at Heriot-Watt University and attended by some 100 delegates.
●	June 2025	Dr Sohan Seth’s (Lead Data Scientist, School of Informatics) travel expenses were funded by GAIL to enable him to present at the Living Planet Symposium 2025 in Vienna.
●	July 2025	A workshop with IMA.RSS and IMS, under the HE Teaching and Learning Workshop Series 24/25 was co-funded by GAIL. The workshop was hosted by Dr Ozan Evkaya, School of Mathematics and entitled “Rethinking Teaching and Learning in the Mathematical Sciences in Times of Generative AI”.



# Seed Funding

## Kickstarting Innovation

Two rounds of seed funding to kick-start new research initiatives and build a multidisciplinary community of researchers in the area of Generative AI were launched and projects selected for funding.

### First Round

In the first round, eight projects were funded in the School of Informatics:

- Conditional Tooth Generation for Digital Dentistry, led by Dr Changjian Li
- Generative AI in Secondary Schools, led by Professor Fiona McNeill
- PLAYSAFE, led by Dr Jingjie Li
- GAIL workshop on Efficient Generative AI, led by Dr Luo Mai
- Retrieving fine grained visual concepts using language, led by Dr Oisin MacAodha
- Recursive Degradation, led by Dr Rik Sarkar
- CLear-SAS, led by Dr Sohan Seth
- A real time data management system for Generative AI Enabled Financial decision making, led by Professor Tiejun Ma

### Second Round

In the second round, 12 projects were funded across the University. The following projects ran from January 2025 to June 2025 and were managed by the Head of Business and Operations.

#### College of Science and Engineering

- Ethics of Large Language Models, led by Professor Alexandra Birch-Mayne, School of Informatics
- Digital twin generation for dynamic tissues, led by Dr Amir Vaxman, School of Informatics
- Learning Logic, not only Relevance: Probabilistic Logic in LLMs for Explainable Multi-modal Financial Forecasting, led by Dr Fengxiang He, School of Informatics
- Beyond Deepfakes : Advancing watermarking in Generative AI, led by Dr Joschka Roffe and Dr Marc Juarez Miro, School of Informatics
- Large Language Models: Are They Ready for Data Science? led by Dr Ozan Evkaya, School of Mathematics
- Generative AI Modeling for Extreme Events, led by Professor Miguel de Carvalho, School of Mathematics
- Optimizing Climate Action Plan Analysis Using DocETL and Large Language Models, led by Mr Andrew Sudmant, School of Geoscience
- Generative AI for Technical Design, led by Professor Jonathan Corney, School of Engineering
- Automatic generation of metadata descriptions for textual assets of the National Library of Scotland, led by Professor Jano van Hemert, Edinburgh Parallel Computing Centre (EPCC)

#### College of Arts, Humanities & Social Sciences

- Generative Creative Visions - led by Dr Caterina Moruzzi, Edinburgh College of Art (Design)
- Chamberfakes: The Risks of Generative AI to Parliamentary Democracy, led by Dr Morgan Currie, School of Social and Politics Sciences
- LLM audio models, led by Dr Martin Parker, Edinburgh College of Art (Music)

## Generative Creative Visions Workshop

In February, GAIL Fellows Dr Caterina Moruzzi and Dr Shama Rahman held a Generative Creative Visions Workshop facilitated by the FlowCreate collaborative AI platform.

The multidisciplinary initiative explored the intersections of Generative AI and creativity. The participants collaborated with a group of colleagues from different disciplines to generate ideas and prototypes for scoping projects around these themes.

Three projects were awarded funding to take proposals forward and showcased the outcomes an event in July.

- The Garden of (Un)Earthly AI's - An Immersive Journey Through Technological Utopias and Dystopias
- Sphaerosymphony
- MIRAI (Measuring Integrity and Responsibility in AI Integration)

*“Receiving the seed funding from GAIL enabled me to bring together a diverse community of artists, researchers, and practitioners, some of whom joined from outside the university.*

*This allowed for a truly interdisciplinary and open dialogue, which culminated in three inspiring pieces that explored the creative and critical potential of generative AI.”*

**Dr Caterina Caterina Moruzzi**  
GAIL Fellow and Chancellor’s Fellow at Edinburgh College of Art



“More broadly, being a GAIL Fellow has given me the opportunity to engage directly with practitioners working on the development and deployment of generative AI systems.” Dr Caterina Caterina Moruzzi continued.

“This proximity to the practice side is essential for my research, which focuses on the socio-technical implications of these technologies. The ability to connect conceptual research with real-world applications and communities is one of the most meaningful aspects of my involvement with GAIL.”

## Beyond Deepfakes Workshop

In June, a workshop led by Joschka Roffe and Marc Juarez Miro was held on ‘Beyond deepfakes, advancing watermarking in Generative AI’.

This interdisciplinary workshop aimed to explore these challenges by featuring accessible contributions from researchers across computer science, law, and social sciences, as well as representatives from industry.



# PR and Communications

## Establishing GAIL’s Public Voice

While the GAIL leadership team was taking place our Head of Communications worked alongside the appointed PR agency, Stripe to deliver on the following:



Development of the GAIL narrative and messaging through a communications workshop and collaboration with Stripe.



A press release and resulting coverage for seed funded projects by Professor Fiona MacNeil on the use of Generative AI in Schools and Dr Oisín Mac Aodha on the use of AI to assist in the understanding of the impact of climate change on biodiversity.



Sourced stories on generative AI for press release by the University’s research communications team.



Led on the planning and delivery, in partnership with Communications and Marketing, of an AI media briefing for Scottish journalists showcasing the University’s expertise in this area that resulted in five pieces of separate media coverage and improved relationships with Scotland-based technology journalists.



Placed op-eds from University academics on the use of AI in the public sector and government policy on AI safety.



Organised a Lunch and Learn session about media engagement for GAIL Fellows and academics from School of Informatics with advice from the Head of Research Communications, an academic with media experience and a journalist about media engagement.



Placed and supported Dr Björn Ross on a Science Media Centre panel on the influence of AI on elections.



Launch of the GAIL website and LinkedIn account. In less than a year, the GAIL LinkedIn account gained more than 1000 followers.

# London AI Showcase

## Connecting with Stakeholders

GAIL was involved in the delivery of a series of events in March 2025, called the AI Showcase, to give the opportunity for various stakeholders based in London to learn more about the University’s AI expertise and offering.

GAIL provided sponsorship and was represented on the working group that organised the event by their Head of Communications. Four events took place over three days targeted at the following audiences:

- Donors and alumni
- Members of Parliament, civil servants and policymakers
- Industry leaders
- Journalists

Most events were very well attended with new connections being made and existing connections cemented. A final report is currently being prepared with follow-up actions.

As part of the planning and preparation of this, the Head of Communications worked with colleagues in Communications and Marketing and Edinburgh Innovations on narrative and messaging on the University’s AI offering with GAIL’s narrative acting as a basis with input from the wider University’s marcomms community and senior leadership.



This messaging then went on to inform the content of an AI brochure and microsite, which the Head of Communications inputted into the design and delivery of.

[Visit microsite](#)



# Business development

## Industry Engagement and Strategic Partnerships

The announcement of GAIL and the search for a director led to an initial round of industry interest. In the main, these sought clarification of the structure and research direction of the laboratory and the opportunities for education, research collaborations and consulting.

Alongside demand for practical training, such as prompt engineering skills, how to use Generative AI for software development, and building regulatory-compliant chatbots, there was also a desire for neutral, non-commercial, expert advice. In the past year, the requests have also included Agentic AI as LLMs have become better understood.

GAIL has been involved in a NatWest Group LLM-based research project, initiated by Dr Jeff Dalton, School of Informatics. This project is now being led by Dr Edoardo Ponti, a GAIL Fellow, and will fund a PhD student from 2025. The PhD will be jointly supervised by Euan Wieslewski, Head of Applied AI, NatWest Group. The total funding committed by NatWest is £154,824.48.

The Head of Business and Operations and GAIL Business Development Executive are working with the Sector Engagement Lead for Financial Services and FinTech at Edinburgh Futures Institute/Co-director for External Engagement and Partnerships at the Edinburgh Centre for Financial Innovations on potential GAIL collaborations with several large financial services companies who are keen to engage with GAIL.

## Executive education proposal

The Head of Business and Operations is working with the Co-Directors, in collaboration with Edinburgh Innovations, to develop a GAIL offering for key decision makers (C-Suite) to help industry leaders understand the potential benefits of Generative AI adoption, but also the limitation and issues that must be considered before effective deployment.

It is hoped that this will have the potential to generate consultancy and future opportunities to collaborate with industry. A teaching fellow in Bayes was engaged part-time for three months (May to July 2025) to develop material and the intention is for the course/workshop to be delivered by a professional trainer once in the autumn and again in the spring next year.

## Compute resource

Our computing officer is managing a GAIL dedicated area of the Edinburgh International Data Facility (EIDF) in EPCC. The area provides controlled access to Graphic Processing Unit (GPU) computation to GAIL staff and Fellows.

We currently manage 12 shared and 19 dedicated GPUs using Kubernetes, including 9 NVIDIA H100 GPUs with 80Gb of memory. We are awaiting the deployment of 22 dedicated NVIDIA H200 GPUs, which will provide substantial computational capacity for training larger neural networks.

In a novel working arrangement for EPCC, we have been able to test the creation of separate subprojects, to give groups the opportunity to work with code and data requiring more privacy.

Current projects using the area include the novel [Learning Model of Life](#), a cross-college initiative of The University of Edinburgh, [retrieval augmented summarization](#), and LLM alignment projects.

# Conclusion

**Our inaugural year has been a resounding success, establishing a strong foundation for future innovative research and collaboration.**

We look forward to building on this momentum and welcoming a new Director to lead the laboratory, bringing fresh perspectives and vision to our community. As we take the next steps in GAIL's journey, we are poised to drive further advancements in generative AI and make meaningful contributions to society.





**A centre for excellence** dedicated  
to researching all aspects of **generative  
artificial intelligence** in society.

[gail.ed.ac.uk](https://gail.ed.ac.uk)

**The University of Edinburgh  
Edinburgh Futures Institute**

1 Lauriston Place  
Edinburgh, EH3 9EF



THE UNIVERSITY *of* EDINBURGH  
**Generative AI Laboratory**