

Gavin Leech

g@gleech.org



— Current affiliations —

Founder, Arb Research

Visiting fellow, LCFI, University of Cambridge

Fellow, Foresight Institute, 2025

Head of camp at ESPR, since 2022

— Some work —

The Scaling Era (2025), Stripe Press.

Ten hard problems in AI (2024), ACM Computing Surveys.

Activation engineering in LLMs (2023), arXiv.

Did masks work? (2022), PNAS.

Collecting all failed replications (2021), Nature blog.

The ESPR summer camp (2022–).

— Awards —

Fellow, International Strategy Forum, 2024

SIPS commendation for work on the replication crisis, 2023

Open Philanthropy Early-Career Funding Award, 2022

Emergent Ventures grant, 'general career support', 2021

UK Research Innovation Council Studentship: PhD funding, 2019

— Education —

PhD in artificial intelligence, University of Bristol, 2020-2024

BSc in mathematics & statistics, Open University, 2015-2019

MA in econ & philosophy, University of Aberdeen, 2008-2012

Apache Spark Developer, Databricks, 2018

— Interests —

Getting into things

Forecasting: above superforecaster level

Amateur critic (1100+ book reviews)

Blogger since 2010 (140+ posts)

— Experience —

Founder, Arb Research (2021 – Now)

Leading a research consultancy on AI, forecasting, and other scientific questions for clients including Schmidt Futures, Open Philanthropy, the Institute for Progress.

Head of Camp, ESPR (2021 – Now)

Leading one branch of the European Summer Program on

Rationality, an experiential education camp for gifted students.
I do hiring, curriculum, teaching, evals. My classes are on things like research skills, cosmology, and cultural literacy. I'm also on the board of FABRIC, the parent organisation.

Volunteer coach, 80,000 Hours (2021—Now)

Advisor for a career advice charity, helping people get into AI safety.

Technical Reviewer, Future of Life Institute (2023—Now)

Reviewing applications for the Vitalik Buterin PhD Fellowship.

Technical Reviewer, PIBBSS (2022—2024)

Reviewing applications for a natural sciences / AI postdoc programme.

Associate, Alignment of Complex Systems (2022 – 2024)

Comms and concepts at a new research group at Charles University Prague.

Worked on formal theories of neglected problems with AI & other systems.

Strategic Advisor, Mercatus Center (2022—2023)

Led a study of AI economics and immigration; briefed the UK Cabinet Office with Ronit Kanwar of Schmidt Futures.

Interim Director, Alert (2022—2023)

Setup & executive search, 'Active Longtermist Emergency Response Team'.

Researcher, EpidemicForecasting.org (2020—2022)

Modelled Covid: results in Science, NeurIPS, PNAS. Led a major study from data collection to journal acceptance. PyMC3, MRP, SEIR, Azure, Seaborn

Assistant Teacher, University of Bristol (2019—2021)

Solo CS instructor, also trained TAs. Machine learning & algorithms.

Technical Reviewer, AI Safety Camp (2018—2022)

Vetting & interviewing for an early safety research programme.

Data Scientist, AXA Insurance (2016—2019)

Tech lead for a team of 5. Built dozens of ML models (GLMs, GBMs, Transformers) for actuarial pricing, medical risk, & image recognition. Actuarial pricing, image recognition, tooling, etc. Web scraping at scale; migration from SAS to Hadoop, & Hadoop to Azure. Spark, Tensorflow, bash

Software developer, Furo (2016)

Developed an Angular SPA for a procurement startup. Sole responsibility for the design & implementation of tendering. TS controllers from C# APIs.

Buzzwords: C# 6, Typescript, Angular, Visual Studio, MS SQL Server

Software developer, Freetobook (2015—2016)

Improved a large legacy accommodation engine: PHP back-end, JS front-end, REST APIs. Solo design of a PCI compliant card storage system. PHP, LAMP, SQL, Laravel, cURL, Gitlab, New Relic

Software developer, Stugo, 2015

Jumped into web dev from a cold start. My code was deployed in pharmacies worldwide within 2 weeks. 2nd employee. C#, WPF, Node.js, MEAN

Database developer, STAND International (2014–2015)

Built the ops database for an international NGO. Solo greenfield design & deployment; delivered at zero infrastructure and licence cost.

Buzzwords: SQL, MS Access, Office365, UML, data protection.

Assistant Statistician, The Scottish Government (2014)

Ran official statistics and helped build a data visualisation platform for teachers. SAS, SQL, PCA.

Volunteer, VSO (2012)

International Citizenship Service programme, living and working with locals in Tanzania. Ran workshops on gender and startup grants for vulnerable women.

Intern, Ordinov Inc (2010)

PA at a software company in Beijing. Handled expenses, liaised with foreign clients, looked at inefficiencies in the company.

— Publications —

The Scaling Era (2025), Stripe Press

Questionable practices in machine learning (2024);
in review at [JMLR](#).

Ten Hard Problems in AI (2024); in review at [ACM Computing Surveys](#).

Steering Language Models Without Optimization (2023); [arXiv](#).

Massively parallel reweighted wake-sleep (2023); [UAI](#).

Trees compensate for model misspecification (2023); [arXiv](#).

Mass mask wearing reduces Covid transmission (2022); [PNAS](#).

Seasonal variation in SARS-CoV-2 transmission in temperate climates (2022); [PLoS Computational Biology](#).

Safety Properties of Inductive Logic Programming (2021);
[AAAI workshop](#)

Understanding government interventions against the resurgence of Covid (2021); [Nature Comms](#).

Reversals in Psychology (2021); [Nature Blog](#).

The effectiveness of government interventions vs COVID-19 (2020); [Science](#).

Robustness of Nonpharmaceutical Interventions (2020); spotlight at [NeurIPS](#).

— Service —

Reviewer. Peer reviewer for PNAS, Nature Scientific Reports, Springer *Machine Learning*, BMJ Global Health, BMC Medicine, AI Safety Camp, PIBBSS, NeurIPS MINT.

Policy advisor. Sep 2021: Briefed the UK Cabinet Office Covid Task Force.

Expert testimony. Briefed the UK Cabinet Office and Department for Trade on AI talent.

Lead organiser. Hosted a small conference, the Bristol Interactive AI Summer School.

— Teaching —

Lead instructor, ESPR.

Course designer and instructor. (Metaphilosophy, metamathematics, meta-science, cultural literacy, speculative cosmology.)

Lead teaching assistant, University of Bristol.

Trained junior TAs for COMS20010: Algorithms 2.

Assistant teacher, University of Bristol.

TA for the fearsome COMS30007: Bayesian Machine Learning.