

gavin leech

AI researcher / technical generalist

g@gleech.org

Site

Scholar

Twitter

Github

LinkedIn

interests

Book reviews,

metascience,

self-calibration,

failures of reasoning,

failures of reasoning

about reasoning,

lists.

experience

2021 – Now	Founder	ARB RESEARCH
	Researching AI, forecasting, metascience, and cause prioritisation for clients including Open Philanthropy, Future of Humanity Institute, Mercatus, Alvea.	
2021 – Now	Lead Instructor	EUROPEAN SUMMER PROGRAM ON RATIONALITY
	Designed a grand maths / experiential learning camp. Sessions on research skills, speculative astronomy, and cultural literacy.	
2020 – 2021	Researcher	EPIDEMICFORECASTING.ORG
	Modelled Covid, resulting in work in <i>Science</i> , NeurIPS, <i>PNAS</i> . Led a major epidemiological study of mask-wearing, from data collection to journal review. <i>Buzzwords</i> : PyMC3, MRP (hierarchical Bayes), AWS, Azure, Seaborn	
2019 – 2021	Teaching Assistant	UNIVERSITY OF BRISTOL
	Solo instructor in CS tutorials, training other TAs. Bayesian ML & Algos 2. <i>Buzzwords</i> : Gaussian processes, Markov Random Fields, Bayesian opt., variational inference, dynamic programming, graph theory, complexity.	
2018 – Now	Technical Reviewer	AI SAFETY CAMP
	Vetting & interviewing for the world's ~1 st intro programme to safety research.	
2016 – 2019	Data Scientist	AXA INSURANCE
	Built dozens of ML models (GLMs, GBMs, neural nets) for actuarial pricing, medical risk, & image recognition. Tech lead for 5 scientists & engineers; web scraping at scale; migration from SAS to Hadoop, & Hadoop to Azure. <i>Buzzwords</i> : Python, Spark, Keras, XGBoost, Tableau, Avro, Pytest, GDPR	
2015	Software Developer	STUGO
	Jumped into web dev; my code deployed worldwide within 2 weeks. Products: a medicine pump device manager & a pharmacy record system. <i>Buzzwords</i> : C#, WPF, node.JS, MEAN, Ractive, Mongo, Vagrant, VMware	

awards

Emergent Ventures grant for general career support

FTX EA Fellowship visitor.

EA Forum Prize for a model of the best-case government response to COVID.

EA Forum Prize for models of how much AI safety is done indirectly.

publications

Mass mask-wearing reduces COVID-19 transmission (2021), [PNAS](#)

Safety Properties of Inductive Logic Programming (2021), [SafeAI @ AAIL](#)

How robust are COVID-19 estimates? (2020), spotlight @ [NeurIPS](#)

The effectiveness of nonpharmaceutical interventions against COVID-19 (2020), [Science](#)

education

PhD Artificial Intelligence, University of Bristol

2024 finish. First year: research Master's (probability, NLP, GOFAL, legal aspects). Second year: COVID modelling projects. EPSRC Centre for Doctoral Training (full-ride PhD).

MSc Software Development, University of Glasgow

82% GPA. Java, SQL, HTML/CSS/PHP, assembly, design patterns, data structures & algos. Thesis: *Hidden Markov Models for Linguistic Accommodation*

BSc Mathematics & Statistics, The Open University

89% GPA. Probability up to diffusion processes, regression to GLMMs, numerics to BFGS, linear algebra to multi-linear, RCTs. Part-time during FT work. Reviewed [here](#).

projects

Reversals in psychology: [Collated](#) the replication crisis; writeup at [Nature](#).

Side effects in Gridworlds: [New environments](#), DQN, MaxEnt IRL in Tensorflow. [cites](#).

ProlexaPlus: [Brought](#) modern language modelling (Flair) into Prolog for some reason.

breadth

Well-received work in epidemiology, philosophy, psychology, economics, ML, linguistics, software. No prior background in psychology, epidemiology, linguistics, logic.

Breadth implies speed: had a <3 month ramp to great publications in epidemiology; also went from no web dev experience to deploying to production in 2 weeks.

judgment

Brier score of 0.16 after a year of fairly hard questions on [Predictionbook](#).

Top forecaster in Nuño Sempere's [Value Forecasting Tournament](#).

Resolution Council member of [Parallel Forecast](#), a short-lived AI prediction market.