

gavin leech

AI researcher / technical generalist

g@gleech.org

Site

Scholar

Twitter

Github

LinkedIn

interests

reviews,
getting into things,
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 Schmidt Futures, Open Philanthropy, Future of Humanity Institute, Mercatus.	
2022	Interim Director	ALERT
	Setup & executive search for 'Active Longtermist Emergency Response Team'	
2021 – Now	Head of Camp	EUROPEAN SUMMER PROGRAM ON RATIONALITY
	I help run 'experiential' maths camps: hiring, curriculum design, teaching. My sessions: research skills, speculative astronomy & cultural literacy.	
2020 – 2021	Researcher	EPIDEMICFORECASTING.ORG
	Modelled Covid, resulting in work in Science, NeurIPS, PNAS. Led a major epidemiological study of facemasks from data collection to journal review.	
	> PyMC3, MRP (hierarchical Bayes), SEIR, AWS, Azure, Seaborn	
2019 – 2021	Teaching Assistant	UNIVERSITY OF BRISTOL
	Solo instructor in CS tutorials & training other TAs. Bayesian ML & Algos 2.	
	> Gaussian processes, graphical models, Bayes opt, VI, graph theory	
2018 – 2022	Technical Reviewer	AI SAFETY CAMP
	Vetting & interviewing for the world's ~1 st intro programme to safety research.	
2016 – 2019	Data Scientist	AXA INSURANCE
	Actuarial pricing, image recognition. Tech lead for 5 scientists & engineers.	
	> Python, Spark, Tensorflow, Keras, XGBoost, Tableau, bash, Pig, GDPR	
2015	Software Developer	STUGO
	Jumped into web dev; code deployed worldwide within weeks. 3rd employee.	
	> C#, WPF, nodeJS, MEAN, Ractive, Mongo, Vagrant, VMware	

awards

Emergent Ventures grant for general career support

FTX EA Bahamas residency; Prague Fall Season fellow.

Top prize, Cybercrime NLP Hackathon, Dutch Serious Crime Unit.

EA Forum Prizes for models of AI safety and the best-case government response to Covid.

publications

Mask wearing in community settings reduces Covid transmission (2022), [PNAS](#)

Seasonal variation in Covid transmission (2022), [PLOS Comp Bio](#)

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

Effects of nonpharmaceutical interventions against Covid (2020), [Science](#)

How robust are Covid estimates? (2020), [spotlight @ NeurIPS](#)

Legally grounded fairness objectives (2020), [arXiv](#)

education

PhD Artificial Intelligence, University of Bristol. 2024 finish. First year: research Master's. Second: Covid modelling projects. Third: work in ML safety. Fully funded by the EPSRC.

> probability theory, Bayesnets, deep learning, computational logic, SVMs, RL.

MSc Software Development, University of Glasgow. 82% GPA. Thesis: *Hidden Markov Models for Linguistic Accommodation*

> Assembly, Java, SQL, HTML/CSS/PHP, design patterns, data structures & algos.

BSc Mathematics & Statistics, The Open University. 89% GPA (First). Part time alongside full-time work. Reviewed [here](#).

> Number theory up to Chebyshev, probability up to diffusion processes, regression to GLMMs, numerics to BFGS, linear algebra to multi-linear, lore of RCTs & meta-analysis

projects

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

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

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. Breadth implies speed: had a <3 month ramp to great publications in epidemiology; also went from no web dev experience to production code 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](#).

On the resolution council of [Parallel Forecast](#), a short-lived AI prediction market.