

gavin leech

AI researcher / technical generalist

g@gleech.org
Site
Scholar
Twitter
Github
LinkedIn

background

machine learning,
web development,
epidemiology,
psychology,
philosophy.

interests

judgment,
getting into things,
metascience,
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 – Now	Advisor	ALIGNMENT OF COMPLEX SYSTEMS GROUP
	Comms and concepts at a new research group at Charles University Prague. We work on formal theories of neglected problems with AI & other systems.	
2021 – Now	Head of Camp	EUROPEAN SUMMER PROGRAM ON RATIONALITY
	Running experiential maths camps: hiring, curriculum design, teaching. Classes on research skills, speculative astronomy & cultural literacy.	
2022	Interim Director	ALERT
	Setup & executive search, 'Active Longtermist Emergency Response Team'.	
2022	Strategic Advisor	MERCATUS CENTER
	Led a study of AI economics and immigration policy for Emergent Ventures. Briefed the UK Cabinet Office and Department of International Trade.	
2020 – 2022	Researcher	EPIDEMICFORECASTING.ORG
	Modelled Covid, resulting in work in Science, NeurIPS, PNAS. > 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, 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, tooling, etc. Tech lead for a team of 5. > Python, Spark, Tensorflow, Keras, XGBoost, Tableau, bash, Pig, GDPR	
2015	Software Developer	STUGO
	Jumped into web dev; code deployed worldwide within weeks. 2nd employee. > C#, WPF, nodeJS, MEAN, Ractive, Mongo, Vagrant, VMware	

(...)

projects

RL side effects
Tensorflow/pycolab

ProlexaPlus
Prolog/FLAIR/PySwip

The First Computers
Python/Transcript

Project Euler
Haskell/Rust/Scala

'Off Road'

judgment

Brier score = 0.16,

Criticism Contest,

Of books, of value,

Consistency

awards

- Emergent Ventures grant for general career support
- Prague Fall Season fellow; Mexico EA fellow.
- Top prize @ AMoC NLP hackathon, run with the Dutch Serious Crime Unit.
- EA Forum Prizes for models of AI safety and government responses to Covid.
- UK Research Innovation Studentship (PhD funding, ~\$150k)

publications

- Mass mask wearing reduces Covid transmission (2022), PNAS
- Safety Properties of Inductive Logic Programming (2021), SafeAI @ AAAI
- Reversals in Psychology (2021), Nature blog
- Nonpharmaceutical interventions against Covid (2020), Science
- How robust are Covid estimates? (2020), spotlight @ NeurIPS

education

PhD Artificial Intelligence, University of Bristol.

2024 finish. First year: a de facto research Master's. Second: Covid modelling. Third: work in ML safety. Fully funded by the EPSRC.

> probability theory, causal inference, ANNs, computational logic, RL

MSc Software Development, University of Glasgow. 82% GPA.

Converting myself to code. Mathematics and psychology of security, law of safety-critical systems, design of UX. Thesis: *Hidden Markov Models for Linguistic Accommodation*.

> Assembly, Java, SQL, web dev, design patterns, algos

BSc Mathematics & Statistics, The Open University. 89% GPA (First).

Part time alongside full-time work. Reviewed here. Covered number theory, probability theory, advanced regression, optimisation, numerical analysis, linear algebra, clinical statistics.

> Mathematica, JAGS, BUGS, wxMaxima, Netlib, Octave, Minitab, ~~L~~A~~T~~E~~X~~