gavin **leech**
data scientist, software developer

about
London based.

Email
Github
Blog
LinkedIn

interests

effective altruism, failures of human reasoning, failures of human reasoning about human reasoning, statistics as applied philosophy, data mining as conceptual analysis, lists.

experience

research
Speaker similarity
Aid impact bounds
Automation & welfare
On data science
Maximum wage
Controversy vs impact
Formal analogies

Sep'16 – Now	**Data Scientist**	AXA Insurance, London

Creating machine learning models (GLMs, GBMs, ANNs) for pricing, medical risk, image recognition on architectural plans; scraping at scale; orchestrating a TB/day Hadoop pipeline. I head a team of 3 junior engineers & scientists.
Buzzwords: Python, Spark, Keras, Jupyter, Hadoop, Oozie, Avro, Pig, Pytest.

May – Aug'16	**Frontend Developer**	Furo, London

Helped on a fresh procurement web app. Sole responsibility for design & implementation of a tendering system, through TS controllers from APIs.
Buzzwords: C# 6, Typescript, Angular, Visual Studio/SQL Server, Bitbucket.

programming
Python/SciPy/Spark,
Keras, *nix, C#, JS
(ES6, node), PHP,
Scala, Pig, LaTeX
...Powershell.

Oct'15 – Jun'16	**Software Developer**	Freetobook, Glasgow

Worked on a large legacy accommodation engine: PHP back-end, JS front-end, REST APIs. Sole design of secure, PCI compliant, credit-card storage.
Buzzwords: PHP (5 & 7), LAMP, SQL, Laravel, cURL, Gitlab, New Relic.

Jun – Sep'15	**Graduate Software Developer**	Stugo, Glasgow

Jumped into web tech from scratch; wrote first production code within 2 weeks, deployed to pharmacies worldwide. Worked on a medicine pump manager (C#) & a secure pharmacy record system (nodeJS). 4th employee.
Buzzwords: C#, WPF, node.JS, MEAN, Ractive, Mongo, Vagrant, VMWare.

metadata
vs publication bias
Career JSON

Dec'14 – May'15	**Database Developer**	STAND International, Edinburgh

Built a small ops database for an international NGO. Greenfield design & deployment; using the 365 nonprofit licence, I delivered this at zero cost.
Buzzwords: MS Access, Office365, SQL, UML, data protection.

Jan – Apr'14	**Assistant Statistician**	The Scottish Government, Edinburgh

Produced & explained official stats for Education Analytical Services. Worked on the 'Insight' reporting platform, giving teachers hard data & viz on their classes & themselves. Prepped the national Social Care Survey 2015.
Buzzwords: SAS, SQL, OLAP, PCA, data protection, official statistics.

software

2017	**sesame: SEarch for StAtistical MEthods**	work in progress

Decision trees / search engine for which stats you can/should use. Scala.js

2017	**The First Computers**	deployed here

Tiny app (and a conceptual analysis) to solve a historical question. Uses the Transcrypt Python transpiler - unfortunately.

2016	**modernlove**	work in progress

A visualiser for sexualities. Python / Django / nose / seaborn

2015	**Py2HTK**	github here

Wrapper for venerable (creaky) ML library, the Hidden Markov model ToolKit.

education

2013 – Now	**BSc Mathematics & Statistics**	The Open University

Proper foundation: Analysis, probability theory, functional analysis, linear algebra, ODEs & PDEs, experiment design and RCTs, sampling theory, classical mechanics & field theory, stochastic processes, medical statistics, Bayesian modelling, thus far. Part-time during full-time work.

2014 – 2015	**MSc Software Development**	University of Glasgow

Conversion Masters: Java, SQL, HTML/CSS/PHP, MC6800 assembly plus 'patterns, data structures & algorithmics. The psychology of security, law of safety-critical systems, design of UX. Thesis in computational linguistics: 'Hidden Markov Models in the study of accommodation'.

2008 – 2012	**MA (Hons) Economics with Philosophy**	University of Aberdeen

Topics covered included formal logic, micro- & macro- economics, rudimentary statistics, health policy, development policy. I received a four-year Alumni Fund scholarship on merit. Dissertation in foreign aid effectiveness: 'Evaluating aid abolitionism'.