Jonny Evans

Machine Learning Engineer

jonnyevans321.github.io jonnyevans321@hotmail.com 07748573216

Experience

Machine Learning Engineer, Shift Lab, (June 2021 - Present)

- Fine-tuned state of the art image recognition algorithms for quality assurance. Built a web app and API to use the algorithm, and make decisions with it. Trialled with quality assurance engineers at Arrival, who chose to use the system in full production.
- Developed and implemented large language and image generation models for an app that builds brands from scratch.
- Developed and implemented lease price forecasting algorithms for a shipping container buy/lease/sell recommendation system.
- Tech includes Python, Docker, AWS, MongoDB, Sagemaker, Streamlit.

Machine Learning Engineer II, Consumer Team, Deliveroo (September 2019 - June 2021)

- Designed, tested and implemented new delivery fee optimisation algorithms. AB test results showed a 1.5% increase in profit per order (worth ~£1.5m annually) with insignificant order volume impact.
- Lead the rollout of the above algorithms to 9 of Deliveroo's key markets. Mentored colleagues to use the algorithm and simulate its effects using shadow pricing.
- Implemented deep learning interpretability methods and used them to inform changes to our restaurant recommendation algorithms.
- Developed regression models on very tight timelines to inform key business decisions on changes to delivery distance limits.
- Built and maintained robust data pipelines.
- Tech included Python, SQL, Docker, AWS, Snowflake, Looker, Jenkins, DBT, CircleCI.

PhD Machine Learning, Transportation Research Group, University of Southampton, U.K. (July 2016 - August 2019)

- Funded by Siemens Mobility Limited and EPSRC.
- Developed machine learning algorithms for road traffic forecasting and incident detection using novel contextual features.
- Improvements over state of the art algorithms of 4.4% mean squared error in the forecasting algorithm, 39% detection rate and 37% false alert rate in the incident detection algorithm, were made.

Theory

- Deep Learning
- Optimisation
- Data analytics
- Inference
- AB testing
- Statistics
- Regression
- Tree-based machine learning

Programming

- Python
- AWS; EC2, S3, Sagemaker, CloudWatch
- Docker, Kubernetes
- SQL
- MongoDB
- C#
- Git, GitHub
- Spark
- CircleCI, Github Actions
- DBT
- Flask
- Tensorflow, Pytorch
- GPT3, Stable Diffusion
- Pandas, NumPy
- Seaborn, Matplotlib

Communication

- Leadership and mentorship
- Interviewing
- Cross-discipline collaboration
- Presentations
- Technical and academic writing

- Month long trial of the algorithms in Bristol Council's Traffic Management Centre. Involved building a web app that displayed alerts to operators and received feedback in real-time. Algorithms detected 11 otherwise unknown incidents. Tech included Python, Scikit-learn, SQL, Docker, AWS, Flask, JavaScript, HTML, CSS, APIs, web sockets.
- Implemented the algorithms within Siemens' software products. This involved pitching, writing successful funding bids, cross-discipline collaboration, and pair-programming with a lead architect.
- 5 publications in leading transportation journals and global conferences.
- PhD project featured in University's Re:action magazine (page 13)
- Advised two Siemens interns and an MSc student in research projects to improve the above traffic forecasting algorithm, funded by the DfT. Further funding continued this research after I left.
- Interviewed Traffic Management Centre managers and operators on the state of incident detection in the U.K.

Graduate Consultant in Intelligent Transportation Systems, Atkins (September 2015 - June 2016)
- Built a Visual Basic for Applications (VBA) based forecasting model of household recycling for Hampshire County Council policy advisors.
- Analysed safety, traffic and geometry data to find the optimal locations to implement ramp meters in North Carolina, U.S.A. Co-authored the final report to the North Carolina Department of Transportation, which recommended the 30 most suitable ramp meter locations for implementation.
- Head of stakeholder engagement for a feasibility study regarding the deployment of temporary electric vehicle rechargers across the U.K. for Highways England. Co-authored the final report to Highways England, which was subsequently published in the 11th ITS European Congress.
- Managed a team of graduates and apprentices in a project which assessed the use of Smart Motorways in the U.K.

BSc Mathematics, University of Birmingham, U.K. (September 2012 - July 2015). First class honours.
- Final year research project, entitled 'Google's PageRank algorithm', won the Blackburn prize for highest mark in graduating year.
- Social Secretary of the University of Birmingham tennis club.

Intern, Cirrus Logistics. (June 2014 - July 2014)
Tested and developed software that optimised the scheduling of shipping berths.

Personal

- Building up a portfolio of data science pet projects on GitHub. Including a VBA based Excel add-in named SymbolFix, which automatically formats engineering symbols to save engineers time. It is still being used regularly today by ex-colleagues at Atkins.
- Loved playing table tennis since the age of nine. Once ranked 2nd in England in under 13s. Coached players of various ages and abilities.