William Grimes

+44 77940 70622
williamgrimes@gmx.com
https://williamgrimes.github.io

Summary

Data Scientist, with two years experience delivering commercial data science projects working with the *World Economic Forum*, *Netherland's Transportation Ministry*, and the *London Fire Brigade*. Hold a **PhD in Bioinformatics**, and a **MSc in Computer Science**, with over eight years programming experience. Dedicated to applying machine learning to solve problems with a positive social impact, and particularly interested in *imaging*, *geospatial data*, and *natural language processing*.

Professional Experience

Data Science for Social Good (DSSG)

Data Scientist **Jun 2017 – present**

Inaugural DSSG Europe member, implemented two complete data science pipelines.
(1) Developed an open-source fishing risk tool combining vessel tracking data with satellite imagery. Implemented a machine learning model to classify vessels, and score them according to likely illegal fishing behaviours, calculated based on multiple risk indicators. Project code is mostly available here: `https://github.com/DSSG2017/wef_oceans`
(2) Lead a team to visualise traffic flows and road traffic incidents over 12 border crossings and a 6 month period for the Netherlands Rijkswaterstaat transportation ministry. Deployed a PostgreSQL database, then performed data cleaning and aggregation, and created interactive visualisations.

ASI Data Science / London Fire Brigade

Data Science Consultant **Jan 2017 – Apr 2017**

Fellowship programme in commercial data science for researchers with strong analytic background.
– Completed intensive 8 week training in machine learning, databases, and statistics, as well as business skills including: communication, negotiation, project management, and commercial awareness.
– In house consultant with the London Fire Brigade, implementing topic modelling methods to classify corpus of 37,000 fire incident reports. In the process revealed previously unknown incident types, and visualised results. Project code: `https://github.com/williamgrimes/london_fire_brigade`

Laboratory for Molecular Cell Biology (LMCB)

PhD Student **Sep 2013 – Nov 2016**

Joint scholarship at LMCB and A*STAR Bioinformatics Institute, Singapore.
– Applied machine learning to segment endothelial cell phenotypes in high-throughput microscopy assays creating over 5TB of data with a detection accuracy of 82%.
– Published articles in *Nature Scientific Reports* and *Journal of Thrombosis and Haemostasis*.

National Institute of Informatics / 国立情報学研究所

International Internship Programme **Jun 2013 – Sep 2016**

– Developed Java software to aid geneticists annotating phenotypes in μCT images of mouse embryos.

Education

University College London

PhD Bioinformatics **Sep 2013 – Nov 2016**

- *Image processing and analysis methods in quantitative endothelial cell biology*

University College London

MSc Computer Science **Sep 2012 – Sep 2013**

- Awarded Aardvark Scholarship 2012

Durham University

BSc Natural Sciences – Physics and Geophysics **Sep 2009 – Sep 2012**

Skills / Keywords

Programming: Python, R, Java, Matlab, SQL, Solidity
Machine Learning: regression, decision trees, ensembles, SVM, neural networks, deep learning
Libraries: NumPy, pandas, SciPy, scikit-learn, scikit-image, OpenCV, Keras, theano, tensorflow
Visualisation: matplotlib, bokeh, plotly, ggplot, Tableau
Scripting: Bash and utils (sed, awk, grep), Python, Ruby
Databases: MySQL, PostgreSQL, SQLite
Misc: Amazon Web Services, Azure, Docker, Git, LaTeX, UNIX