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Andrew Ellul

Profile

I am a computer scientist with experience building, deploying and maintaining production-grade applications in the Financial, Automotive and Tech industries across the UK and Germany. I have done so in various roles, from software engineer to technical product owner. My primary interest is in building highly user friendly, intuitive, data-driven applications. I am also interested in the topics of data visualisation, graph science, information retrieval and nlp. Fluent in English (Native), German and Maltese.

Experience

10/2020 – Present — **Data Science Working Student, Amazon AWS**, Munich, Germany

- *ML Project:* Building an unsupervised ML recommendation engine to automate sales pipelines for customer product adoption.
- *Big Data:* Clustering on 6 Million+ customer records, required highly optimised code using e.g. vectorised operations in pandas and numpy to clean and transform data. Developing hypotheses for exploratory analysis, testing and validating theories.
- *Technical Knowledge:* Using Amazon SageMaker, Pandas, Sci-kit learn, K-means clustering and other visualisation tools to create an end-to-end tool (from data to display) that extracts, analyses and presents data to internal sales teams.

09/2016 – 03/2020 — **Lead IT Consultant, Capgemini**, Berlin, Germany

- *Technical Product Owner – VWFS Global e-commerce Platform:* Planned feature rollout, MVP design and developed technical spec. for a new e-commerce platform at VWFS. Organised workshops with UX, Legal, Technical Architects. Reported directly to head of digital unit, who reports to CTO. Designed system architecture, produced UML, Sequence Diagrams of API specifications.
- *Functional Architect:* Functional architect for a complex engine emissions and efficiency calculation system at BMW. This system was responsible for extrapolating emissions data to conform with new WLTP laws introduced by the EU after the VW scandal.
- *Software Developer:* Coded proof-of-concept features with new technologies for a continuous integration and testing pipeline for a new enterprise system at BMW.
- *People:* Aided in recruiting and mentorship of new hires. Attended recruiting fairs, trained new consultants and coordinated with clients on team structures. Lead team retrospectives, in my last 2 years I focused on people-building and team cohesion.

01/2016 – 07/2016 — **Backend Software Engineer, Signavio** (acquired by SAP), Berlin, Germany

- Built the foundations of Signavio's new process mining product. Implemented a Petri-net based data analysis tool to investigate process data and serve the results to a front-end data analysis tool. Used Java 8, NoSql, MongoDb, Sql, Hibernate.

06/2014 – 08/2014 — **Software Engineer Intern, Goldman Sachs**, London, UK

- Developed a RESTful data reference system to serve trading data to traders using a proprietary programming language (SLANG) in the backend and AngularJS, for the front-end

07/2013 – 06/2014 — **Technology Analyst, J.P. Morgan Chase**, Bournemouth, UK

- Developed a data science app that visually mapped communication pathways within the IB's Backoffice trade clearing system.

Education

10/2019 – Present — **M.Sc. Computer Science, Technical University of Munich**, Germany (1,9 GPA - German Scale: 1,0 Best – 5,0 Fail)

- *Major:* Machine Learning and Analytics, *Minors:* Formal Methods, Distributed Systems

09/2011 – 06/2015 — **B.Sc. Computer Science (Hons) with Industrial Placement, University of Manchester**, UK, **1st Class (Hons)**

- *Thesis* (**Distinction**): A Java based desktop tool for graph and social network analysis, with statistical measures (centrality computations) and visualisation components.

Awards

2015 — **Highly Commended,** International Undergraduate Awards (for bachelor thesis submission)

2013 — **Manchester Leadership Award** – for voluntary work with the Manchester Scouts Group

Service

Education — **Event Organiser,** TEDxTUM (2019) **Maths Tutor,** The Tutor Trust UK (2014-2015)

Community — **Assistant Scout Leader,** The Scouts Association UK (2012-2013), **Various Roles,** The Scouts Association Malta (2005 – 2011)

Military — **Officer Cadet,** The Royal Navy, Manchester M&S URNU - University Royal Naval Unit (2011)

Skills

Research — "Quantifying Polarization in Social Networks" (2021, **Distinction**), "Multi-Task DL for Hatespeech detection" (2020, **Distinction**)

Programming — Java (Java 8, Jersey), Python (Pandas, Matplotlib, Numpy, NetworkX, Conda), SQL, NoSQL (MongoDb), API and RESTful web-app development, automation (selenium)

Data Science — Graph and Network Science, Web Scraping & Information Retrieval, Natural Language Processing, Deep Learning, Unsupervised methods (K-Means),

Certifications — AWS Cloud Practitioner (2020), Scrum Product Owner I (2018)