



Andrew Ellul

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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 to AI solutions architect. My primary interest is in building highly scalable, data-intensive, cloud-based systems. I am also interested in the topics of NLP, graph and network science, information retrieval, generative AI and quantum computing. Fluent in English (Native), German and Maltese.

Experience

- 08/2023 – Present **Startup Solutions Architect, Amazon Web Services**, London, UK
- **End-to-End Technical Advisory:** I guide and advise my customers on all aspects of their technology and business growth in the cloud
 - **Generative AI:** I drive an initiative with Principle SAs to develop a framework for launching GenAI use-cases, from producers to consumers
 - **AI/ML Scaling Team:** Developing scaling material, coding notebooks, architectures and GTM strategies for AI/ML Startups
- 04/2022 – 08/2023 **Solutions Architect, Amazon Web Services**, Munich, Germany
- **German SMBs & Analytics + AI/ML:** Helping SMBs in DE grow their cloud architectures. Focus on Analytics, AI/ML pipelines
- 10/2020 – 03/2022 **Data Science & Solutions Architect Working Student, Amazon Web Services**, 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 PoCs with new technologies for a CI-CD and testing pipeline for a new enterprise system at BMW.
- 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 ref. system for traders using SLANG (GS scripting lang.) 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)

Skills

- Research “Quantifying Polarization in Social Networks” (2021, Distinction), “Multi-Task DL for Hatespeech detection” (2020, Distinction)
- Programming Java, Python (Pandas, Matplotlib, Numpy, NetworkX), SQL, NoSQL (MongoDb), API and RESTful web-app dev, automation (selenium)
- Data Science Graph and Network Science, Web Scraping & Information Retrieval, NLP, Deep Learning, Unsupervised methods (K-Means),