Daniel Simons

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Profile

Software engineer currently looking to explore further study in Machine Learning field. Graduated from the University of Sussex with a BSc in Computer Science, achieving one of the top results in my cohort in modules covering machine learning, data structures & algorithms, mathematics, compilers and computer architecture, and further programming.

Professional Experience

Software Engineer, Amygda AI   *2024 – Present*

- Lead the development and implementation of ML Ops pipelines on Google Cloud to automate and orchestrate machine learning workflows for Amygda AI's web-based platform.
- Collaborate with cross-functional teams to integrate machine learning models into production, ensuring seamless deployment and scalability.
- Develop and maintain the backend infrastructure using FastAPI and Python, ensuring robust and efficient data processing and API management.
- Contribute to the frontend development using React and JavaScript, enhancing user experience and ensuring responsive and interactive web interfaces.
- Optimize cloud resource management and cost-efficiency through strategic use of Google Cloud services.
- Work closely with data scientists and engineers to troubleshoot and resolve issues related to data pipelines and model deployment.
- Ensure adherence to best practices in software development, including code reviews, testing, and documentation.

Software Engineer, KX Systems   *2021 – 2023*

Delivered cloud native solutions to a selection of KX's most prestigious clients:

- Utilised Angular, Django and kdb core to create a flight tracking web application for client. Webapp was containerised and deployed to an Azure Virtual Machine.
- Sole developer for top motorsport client, developing a data analytics platform for prototype production cars using the kdb/q technology stack. Used agile software development principles with weekly sprints organised through Azure DevOps.
- Partnered with motorsport client to develop a proof of concept (PoC) analytics dashboard utilising kdb/q and KX Refinery. Dashboard facilitated real-time and historical analysis of race car telemetry and was deployed on a Google Cloud virtual machine.
- Led the presentation of our final PoC to pre-sales department helping to secure large sale for the company.

Lead Researcher, "Machine Learning and Financial Crises"   *September 2020 – May 2021*

- Led an investigative research project to explore how machine learning (ML) models trained on public social and economic datasets can be used to predict financial crises.
- Developed ML models based on regression, random forest classifiers as well as more advanced models that use convolutional neural networks.
- Worked with a range of public and private stakeholders to evaluate and assess the performance of these ML models on several public datasets.

Lab Demonstrator   *September 2020 – August 2021*
- Lab demonstrator for first-year Computer Science undergraduates at University of Sussex.
- Answered undergraduate students' queries about the lab material and supported them to pursue their own independent research projects.

Education
Computer Science BSc, University of Sussex   **2018 – 2021**
- Upper Second Class Degree
- Key modules:
    - Year 1: Data Structures & Algorithms (87%), Further Programming (74%), Mathematical Concepts (75%)
    - Year 2: Fundamentals of Machine Learning (81%), Software Engineering (75%), Program Analysis (72%), Compilers & Computer Architecture (71%), Databases (69%), Computer Networks (71%)
    - Year 3: Introduction to Computer Security (70%), Final Year Project (68%)

A-Levels, University College School, London   **2015 – 2017**
- Mathematics (A), Geography (A), Politics (C)

GCSEs, North Bridge House Senior School, London   **2010 – 2015**
Mathematics (A*), Further Additional Science (A*), French (A*), English Language (A), Core Science (A), Additional Science (A), Geography (A), English Literature (B)

Skills
Web Development:
- Python (Django), TypeScript/JavaScript(Angular), REST APIs, SQL, HTML, CSS, Java, kdb+/q, Docker, Kubernetes, Google Cloud Platform (GCP), Microsoft Azure, Kafka, MQTT, networking protocols, Unit Testing, MySQL, MongoDB

Operating Systems:
- MacOS, Linux/Unix (Unix CLI), Windows

DevOps:
- Git, GitLab, GitHub, AzureDevOps, Jira, Visual Studio Code

Prior Experience
- Ran small technology advisory business
- Developed basic game apps for the iOS platform
- Provided technical assistance on ad-hoc outside broadcast BBC Radio productions across Europe.
- Ran small online eBay business
- Co-founded drone photography venture
- Volunteer National Trust ranger
- Labourer on construction site
- Deliveroo bicycle courier

Interests
- Keep abreast of whole technology industry (specifically, AI, FinTech & Aerospace technology)
- Astronomy
- Fossil Hunting

References

Ian O'Dwyer
Senior Sales Engineer – KX
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Dr Adam Barrett
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