DANIEL DAVIES

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OVERVIEW

I am a diligent and hardworking **Machine Learning Engineer** and **Artificial Intelligence MSc** student, with a passion for solving complex problems. MSc and **BSc First-Class Honours** degrees at Brunel University London have given me a strong knowledge across a range of areas including deep learning, machine learning, exploratory data analysis, data cleaning, data visualisation, and software engineering. I have also enjoyed working in teams to complete various projects at university and am comfortable taking leadership roles.

I am currently working on an AI MSc dissertation, developing mechanistic interpretability methods for safety, capabilities, and advancing our understanding of models. Completing my BSc dissertation, "The Prediction of Energy Consumption of Algorithm Implementations", enhanced my problem-solving and programming skills, as well as developing project management abilities.

Whilst studying at university I have been working at Projekt Rising Ltd. This role has given me excellent experience developing artificial intelligence applications, with software engineering and I have enjoyed added responsibilities working directly with clients frequently.

TECHNICAL SKILLS

- Extensive knowledge in **Deep Learning** and **Data Analysis**
- Confidence in **Python** (including **TensorFlow** and **PyTorch**) through university and personal projects
- Proficiency in **JavaScript** (including **React.js** and **Node.js**), **HTML**, and **CSS** through work, university, college, and personal projects
- Experience in **R, Java,** and **MongoDB**, through university and personal projects

I am excited to learn any skills necessary to solve problems. See https://github.com/DanielJamesDavies for my most recent personal projects.

WORK EXPERIENCE

Machine Learning Freelancer
Projekt Rising Ltd | *September 2022 – Present*

- Automation - Built systems using several AI techniques to automate previously time-consuming processes.
- Tools - Developed tools at scale for organisations to easily construct different types of desired content and documents through a language interface.

EDUCATION

Artificial Intelligence MSc
Predicted Distinction
Brunel University London | *September 2023 – September 2024*

Computer Science (Artificial Intelligence) BSc
First Class Honours
Brunel University London | *September 2019 – July 2022*

Computer Science Project (Dissertation)	A+	Software Development & Management	A*
Artificial Intelligence	A+	Algorithms and their Applications	A
Advanced Topics in Computer Science	A+	Networks and Operating Systems	A
Year 2 Group Project	A+	Usability Engineering	A

BTEC Level 3 Extended Diploma in IT & GCSEs
West Herts College | *September 2017 – June 2019*
Triple Distinction Star (D*D*D*)

Kings Langley Secondary School | *September 2012 – June 2017*
8 GCSEs including Mathematics and English

KEY PERSONAL PROJECTS

Apollo / On New Methods of Interpretability in Deep Learning

https://github.com/DanielJamesDavies/Apollo-LLM-Analyser

Currently working on discovering new mechanistic interpretability methods for my MSc dissertation. Also developed a web application to manage and develop analysis models and visualisations for interpretability.

Used Python, Hugging Face Transformers, NumPy, Pandas, JavaScript, React, Chart.js, and more.

Atlas Story App

https://www.atlas-story.app | https://github.com/DanielJamesDavies/AtlasStoryApp

Developed a large platform for users to create and share stories. Built a large number of features including the ability to create interactive 3D and 2D maps of a story's universe, character relationship charts, Spotify integration, a storyboard video editor, structured story content creation (for characters, plots, locations, etc), a user account system, and much more.

Used React, Node.js, Three.js, MongoDB, Heroku, and more.

Algonet / The Prediction of Energy Consumption of Algorithm Implementations

https://github.com/DanielJamesDavies/Algonet

A project for my BSc dissertation that produced a model that predicts energy consumptions of algorithm implementations.

Used Python, PyTorch, NumPy, scikit-learn, SciPy, JavaScript, and more.

REFERENCES

References available on request.