

Euan Goodbrand - London

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EDUCATION

Imperial College London

Master of Science in Computing (Artificial Intelligence and Machine Learning)(Pred: Distinction)

London, UK

Oct. 2023 – Oct. 2024

University of Sheffield

Bachelor of Science in Computer Science; First Class Honours (Top Student in Cohort 1/300)

Sheffield, UK

Sep. 2020 – Jul. 2023

Architectural Association

FHEQ level 4 Certificate in Architecture

London, UK

Sep. 2019 – Jul. 2020

Denstone College

A-Levels in Maths, Physics and Design Technology

Derby, UK

Sep. 2017 – Jul. 2019

EXPERIENCE

Imperial College London

Machine Learning Research Assistant

London, United Kingdom

Feb 2024 – Present

- Lead co-author of a comparative study on different deep graph-based learning techniques for Super Brain Graph Resolution.
- Conducted an extensive literature review and data analysis, contributing to developing and evaluating various machine learning models.
- Delegated and coordinated tasks to approximately 20 co-authors, ensuring consistency and accuracy of results and work across the team.
- Co-authoring two additional papers on Graph Fusion of features using deep graph-based learning techniques, currently on hold.

Stantec

Internship

Reading, United Kingdom

Jun 2018 – Aug 2018

- Stantec is an international professional services company in the engineering, design and consulting industry. Analysed information about the University Camus project to improve efficiency.
- Collaborated with architects to drive the integration of technology solutions, optimising project outcomes.

Beton Quest

Administrator and Developer (Co-Founder and Volunteer)

Remote, UK

Jan 2018 – Present

- Co-founded online community and aided the development of a niche Minecraft plugin into a Top 10 (7th/70k+) Rated Plugin, driving online growth from zero users to thousands of users and attracting numerous sponsors. It is the most popular and advanced plugin for adding in-game quest storylines.
- Transformed plugin into a tool akin to a scripting language, with 32 integrations and vast documentation, fostering a community of volunteer developers.

PROJECTS

Procedural Modelling and Generation Software Research | *Java, Python, Maven, Graphics*

(Publication available at request)

- Conducted research exploring and creating novel algorithms for producing complex graphic models and presented research to over 1,000 developers at the Sumo Digital Developer Conference 2023.
- Utilised procedural modelling to create 3D models and textures using state-of-the-art algorithms from research papers.
- Successfully developed advanced 3D interactive models for enhanced user experience. User testing and feedback were positive, showing successful completion of the specification.

Trading Chess: Bridging Chess and Finance (ICHACK 2024, Marshall Wace) | *React, Styled-Components, React Router, Chess.js, Firebase* [GitHub Link](#)

- Aimed to create an engaging educational platform combining finance with chess. **Task:** Develop a chess variant incorporating real-time stock data.
- Leveraged React and Styled-Components for UI, integrated Chess.js for game logic, and Firebase for online multiplayer functionality. Designed responsive layouts and a tutorial mode for teaching financial concepts through chess.
- Successfully launched "Trading Chess," achieving a unique educational tool that teaches investment strategies via gameplay. Facilitated learning across multiple platforms with positive user feedback on its innovative approach.

AI Movie Review Analysis (Top 5% on Kaggle Dataset) | *Python, Numpy, Pandas, NLTK*

[GitHub Link](#)

- Developed and applied a Naive Bayes Multinomial Classification model to the Rotten Tomatoes movie review dataset from Kaggle, achieving a performance within the top 5% of competition standards.
- Implemented efficient data preprocessing and feature extraction techniques, using Numpy and Pandas, for sentiment analysis of movie reviews.
- Conducted rigorous model evaluations using Macro F1 scores and accuracy, achieving high scores.

Deep Q-Network for Cart Pole Balancing OpenAI Gym | *Python, PyTorch, Reinforcement Learning*

[Github Link](#)

- Initiated a project to explore the application of Deep Q-Networks (DQN) in solving the Cart Pole balancing challenge using OpenAI Gym.
- Independently designed and implemented a DQN model, experimenting with various hyperparameters. Undertook an extensive testing process with 300 episodes across ten runs for comprehensive model validation.
- Successfully developed a robust and efficient AI model, achieving rapid convergence and high performance in a dynamic reinforcement learning setting.

Card Shuffling Product | *C++, Embedded Software, aREST (JavaScript, HTML, CSS)*

[GitHub Link](#)

- Preventing card shuffling cheating necessitates a unified hardware-software solution.
- Utilised C++, aREST interface, servo motors, and microcontrollers to build a product that merges embedded systems, web development, and 3D printed iterative prototyping with jam detection using ultrasonic sensors.
- Successfully created a system that prevents cheating in card shuffling without damaging cards.

AWARDS & CERTIFICATION

Douglas Lewin Memorial Prize: Awarded for best examination performance in the Department of Computer Science.

Software Hut Prize: Awarded in recognition for the most effective software for a real-world client , following an agile development process.

Global Engineering Challenge-Best Communicated Solution Award : This is awarded to one team per project for researching and presenting a cost-efficient and effective solution to the EWB board members.

AWS Certified Cloud Practitioner: AWS CCP Certificate validates a high-level understanding of AWS Cloud services.

Databricks Lakehouse and Gen AI Fundamentals Accreditation: Knowledgeable in Databricks with skills in data management and analytics.

Docker & Kubernetes: The Practical Guide: Completed a course on Docker and Kubernetes, Udemy.

SKILLS

Programming Languages: Python, Java, Scala, C#, C++, JavaScript, TypeScript, Ruby(Rails)

Technologies and APIs: AWS, Docker, Kubernetes, TensorFlow, Scikit-learn, OpenCV, NumPy, Pandas, PyTorch, React, Matplotlib, MYSQL, PostgreSQL, Linux, Agile Development, OOP, Github, Github-CI/CD, Git, PyTest, PowerBI, Apache NiFi, Maven, Gradle, Junit, RSpec, Keras, BERT, GPT, spaCy, NLTK, Graph Neural Networks (DGL), OpenAI Gym, ROS, CUDA, TensorFlow.js, TensorFlow Lite, Hugging Face Transformers, Apache Spark, Apache Kafka