

Constance Vielma

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EXPERIENCE

Artificial Intelligence Research Intern

June 2023 – Sep 2023

Ampersand Health Digital Therapies

London, UK

- Developed an novel AI/ML model that aimed to track, predict and prevent patient disease flare-ups
- Contributed 10K+ lines of code to an established codebase via Git
- Interrogated the database of patient records to pull relevant user data with `mysql` through DBeaver
- Wrote an 6-page report and pitched algorithm to entire team

EDUCATION

University of Nottingham

Awarded 2:1

Bachelor of Science in Computer Science, with Honours

Sep 2021 – July 2024

- Developed a robust CV image segmentation algorithm with a pixel-wise accuracy of 93%. Implemented both traditional and Machine learning techniques (thresholding, HoG, edge detection etc) and both custom-built and fine-tuned convolutional neural networks for image-to-image processing.
- Produced a mixed-reality dance game in Unity, Open-CV pose- tracking in Python, pitched at Showcase to industry visitors and received Best Demo Award
- Persevered throughout the engineering cycle to bring a letting agency app in Java to fruition. Tested using TDD Practices using JUnit
- Mastered professional documentation in Project Report and Software Specification for team projects, utilised Visual Paradigm extensively for software diagram documentation.

YCIS Shanghai, China

Awarded 40/45 (equivalent to AA*A at A-Level)

International Baccalaureate

Sep. 2018 – July 2021

- Higher Level: Math AA, Biology, English, SL: Chinese as a Second Language (7/7) Chemistry, Business Management
- 9 IGCSE, 5 A*'s, 4 A's including Computer Science (A*), Mathematics (A) and Chinese Foreign Language (A*)

PROJECTS

A Virtual Doctor's Appointment | *Python, Flask, Jupyter Notebook*

May 2024 – Present

- Developed a full-stack Chatbot web application using with Flask serving a REST API with React as the frontend
- Utilised LLM Pytorch transformers to fine-tune multiple Chatbot using Neural Networks
- Engineered 3 separate Chatbots and performed research style testing to produce a state-of-the-art approach to Chatbot design and their applications to the medical industry
- In the process of getting published, manuscript under review.

Open Source Assistive Device: Face Scanner | *Java, Android Studio, Figma*

Dec 2023 – May 2024

- Volunteered to develop 'Face Scanner' app using computer vision concepts OpenCV and python for backend
- Adopted Transfer learning through Open-CV facial recognition functionalities to assign NIV mask sizes in pediatric emergency care
- Collaborated with NHS clinical practitioners at QMC Hospital, maintained professional client relationship

Dance For Me | *Open-CV, C#, Unity, Python, Git*

Nov 2022 – May 2023

- Mixed reality immersion dance game, with pose-recognition in Python determining the score. Strong HCI approach with my role being game UI/UX design
- As Lead presenter and a member of Front-end team, pitched to industry and the project was awarded Best Demonstration & Front-End
- From game design and conceptualisation to presentation

TECHNICAL SKILLS

Languages: Java, Python, Matlab, SQL (MySQL), HTML/CSS

Spoken Languages: English (Native), Mandarin (HSK5 equivalent), Spanish (Advanced)

Tools/Frameworks: Git, Figma, GitHub CI/CD, Trello, VS Code, IntelliJ, Eclipse, Unity (game engine), Flask, JUnit

Libraries: Scikitlearn, seaborn, pandas, NumPy, Matplotlib, huggingface, OpenCV, transformers

Other: Currently employed as Subject Ambassador for School of CS, Junior Website Editor for UoN Fashion Society, wrote multiple feature articles for online newspaper the Tab