LUCY RANDEWICH

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Education

BSc Computer Science, University of Bristol **2020-2023**

- First class honours achieving 79% in Year 2, and a final overall grade of 75%.
- Awarded the 'Hargrave Scholarship for Academic Achievement' for having the highest grades in the cohort in first and second years of study.
- Received '2022 Netcraft prize' for placing in the top 10 second year students.
- My thesis 'Deep Metric Learning for the Visual Identification of Individual Cattle from Depth Imagery' is publicly available on GitHub.

The Abbey School, Reading **2013-2020**

- A-Level Grades: Maths (A*), Computer Science (A*), Physics (A)
- AS-Level Grade: Further Maths (A)
- 10 GCSEs at A*
- Full marks in A-Level Computer Science project

Employment

Research Associate, Bristol Cyber Security Group **May 2023-Present**

- Working for the University of Bristol-based group in the creation of an exercise to highlight cyber security best practice with an emphasis on the consequences of insecure remote working.
- Role involves the creation of a back-end tool and GUI to be used in sessions facilitated by the City of London police force.

Teaching Assistant, University of Bristol **2022 - 2023**

- COMS20006: Software Project Engineering. Led weekly stand-up meetings for two teams of second year students. Provided support with client interactions for their projects and gave full-stack technical support to students. Also was lead TA for the resit period, aiding students and being part of the marking process.
- COMS20012: Computer Systems B. Taught second year students concepts involving software security and operating systems. Attended weekly lab sessions and helped prepare technical worksheets for the students to practice skills.

Machine Learning Intern, Oxford Nanopore **July-September 2022**

- Validated design choices and optimisations for neural networks in bioinformatic applications, focusing on a tool for classification of methylated bases given nanopore signal and basecaller output.
- Conducted research into differentiable Neural Architecture Search methods for automated network architecture tuning, for use in the creation of networks for new methylation data as it arises.
- Worked on the creation of pipeline automation scripting tools to allow easier model training and evaluation for the MLOps team to use.
- Used human genome data to create datasets of regions of clinical interest to allow faster evaluation of base-calling on these regions and created pipeline scripts to carry out analysis on these datasets.

Ambassador, Instagram UK **2018-2020**

- Provided feedback and suggestions on new features to the Instagram app before launch.
- Received "Ambassador of the Month" award for continued contributions.
- Attended events in Instagram's London offices, including a day of shadowing a community manager.

Jack Wills Customer Assistant **2018-2019**

- Worked with the public and completed tasks such as stock merchandising under time pressure.

Work Experience

Oracle Corporation, Reading **Jul 2019**

- Week of work experience with the Artificial Intelligence team.
- Worked with a client at Reading Buses to produce an application for scheduling bus arrival times.

Instagram UK **Dec 2018**

- Spent a day at Instagram's London HQ brainstorming ideas for events.
- Pitched technical ideas for improvements to Instagram features at meeting with Robby Stein, former Head of Product.

Projects

Deep Metric Learning for the Visual Identification of Individual Cattle from Depth Imagery

- My BSc dissertation project was in the sphere of deep learning for agriculture, supervised by Dr. Tilo Burghardt. It achieved a high first-class of 77%.
- Curated a new dataset and purpose designed a network architecture for the task of identifying individual cattle from depth imagery alone.
- Evaluated data augmentation, loss functions, and model backbones and performed ablation studies to facilitate interpretation and discussion of quantitative results.
- Performed spatial localisation of inter-class individuality using a Grad-CAM inspired algorithm.

Graphics Renderer

- Developed a graphics renderer from first principles using C++.
- Implemented three rendering modes: wireframe, rasterised, and ray traced.

IBM "AR Messaging"

- Developed an Android mobile application in a small team for a client at IBM.
- App uses augmented reality allowing users to send messages to each other and see them in the sky.
- Responsible for developing a Spring-Boot server deployed to IBM cloud using a Kubernetes toolchain.
- Maintained a blog about the project, which is hosted at `https://sky-write.github.io`.

Web development

- Created a resume website for fun using pure HTML, CSS and Javascript. Site is hosted at `lucyrandewich.co.uk`
- Challenged myself to learn the React framework from scratch in under two hours, and created a website for a mock business which can be found on my GitHub.

Calendar app

- Designed and created application for linking users' calendars, allowing groups of people to visualise their availabilities for my A-level computer science project.

Other Skills

- Working knowledge of computer architecture, algorithm analysis and theory of computation.
- Ability to quickly gain proficiency any programming language or toolkit, but currently most familiar with Python, C++, C, and Java.
- Proficient in using Linux-based environments.
- Familiar with Git-based VCS in professional codebases.
- Experience in agile workflows.
- I paint realistic oil portraits and landscapes in my spare time and have sold prints of my artwork as well as selling commissioned work.
- I am excellent at building relationships in new environments and communicating with colleagues, whether that be asking for guidance or presenting my work.
- Always looking to try my hand at new skills, and would never turn down opportunities to challenge myself and learn!