

VANDAM DINH

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Personal Site: <https://vandam.tech>

EDUCATION

University of Bristol | Engineering Mathematics, (MEng)

2021 – 2025

First Year: 72% (First class)

Relevant Modules:

- **Completed:** Computer Programming (Python), Discrete Mathematics, Mathematical and Data Modelling, Introduction to Data Science, Numerical Methods in MATLAB
- **Upcoming:** Introduction to Artificial Intelligence, Computational Neuroscience, Optimisation Theory and Applications, Scientific Computing

Merchant Taylors' Boys' School; Crosby, Liverpool

2019 – 2021

A-Levels: Further Mathematics, Mathematics, Design & Technology, Physics - A*A*A*A

GCSEs: 9A*s, 2As

RELEVANT PROJECTS

Mixtape (Personal) – [GitHub](#)

03/2023

- Developed a Flask-based web application that leverages FFmpeg, Spotipy, and Spotdl to enable users to download and create custom mixtapes from their Spotify Playlists.
- Enabled secure user authentication and authorisation for the application by integrating the OAuth 2.0 authorisation code flow, ensuring that users can convert their private playlists into custom mixtapes.

Evaluating the Viability of Micro-Scale Pumped Hydro Systems (Project Leader) – [GitHub](#)

01/2023 – 02/2023

- Converted formulae from my team and [Mousavi et al.](#) into Python functions, enabling us to validate our Pumped Hydro System design through simulation.
- Incorporated Bayesian Optimisation to identify the optimal profit per day for different height differentials, and assessed feasibility by analysing the corresponding payback period.

Personal Website (Personal) – [GitHub](#) | [vandam.tech](#)

01/2023

- Deployed a static site using Zola on GitHub Pages, using Actions to automate the generation of new blog posts and pages upon pushing updates to the repository.
- Integrated a dynamic feature that displays recent listening activity using Last.fm API with Javascript.
- Employed SASS and a customised colour palette to elevate the visual aesthetics of the website, taking inspiration from the style of Notion.

COVID-19 Data Visualisation (Project Leader) – [GitHub](#)

03/2022 – 05/2022

- Coordinated the development of an interactive site displaying COVID-19 metrics of the UK with Python, Plotly and Dash.
- Designed the site using FigJam, encouraging collaboration to formulate new ideas from other team members.
- Implemented callback functions for cities and time range so plots automatically update based on user input.

Optimising the Connections of Telecommunication Networks (Project Leader) – [GitHub](#)

01/2022 – 03/2022

- Compiled algorithms that found the minimum spanning tree of a network, applied it to a real-world scenario and determined the most suitable method.
- Worked on explaining the algorithms, drawing figures with Inkscape and developing a Python function that generated a weighted graph given the coordinates of nodes using NetworkX.
- Assessed and processed the works of others from Google Docs into Overleaf.

WORK EXPERIENCE

Charlie Chans Takeaway (General Assistant) | Waterloo

04/2017 – 09/2019

- Organised and prepared ingredients for the chef and arranged inventory for uninterrupted service.
- Provided exceptional service that contributed to several 5-star reviews on Google.
- Connected with staff members to create a fun and positive working environment.

Crosby Library (Volunteer) | Liverpool

05/2017 – 08/2017

- Familiarised, maintained and organised a large catalogue of books.
- Inspected computers and provided help to the public and staff members with technical support.

SKILLS AND INTERESTS

Programming: Python, LaTeX, HTML, CSS, macOS, Linux

Python Libraries: Pandas, Plotly, Dash, Matplotlib, NetworkX, SymPy

Tools: Git, Docker, Heroku, Overleaf, Anaconda, Jupyter, Maple, MATLAB, Inkscape, Obsidian, Notion, Microsoft Office

Hobbies: Wild camping, Bouldering, Photography, Guitar, Web Design, Mechanical Keyboards, Music Production