

# Jay Mistry

Email: [jay\\_mistry@live.co.uk](mailto:jay_mistry@live.co.uk) | Mobile: 07947 169 585 | Website: [www.jellyware.co.uk](http://www.jellyware.co.uk)  
GitHub: [www.github.com/jaym-01](https://github.com/jaym-01)

## EDUCATION

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### Imperial College London - Electronic and Information Engineering:

- Obtained the **Dean's List** in my 1st year for academic performance (top 10% of the year).
- Built a rover to detect EM signals in a team of 6 for the first-year final project.
- Built a pipelined RISC-V 32-I (CPU) using System Verilog & C++ (achieved an **A**).
- Built a C to RISC-V compiler with C++, Flex and Bison.

**A-Levels**, 2020-2022: Maths – **A\***, Physics – **A\***, Computer Science – **A\*** (Coursework: designed and built a normalised MySQL database, with a desktop app to perform CRUD operations (C#)), EPQ – **A**

**AS-Levels**, 2021-2022: Further Maths (self-taught) – **A**

## SKILLS

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**Programming Languages:** Python (Intermediate), TypeScript (Intermediate), C++ (Intermediate), HTML/CSS (intermediate).

Familiar with **Linux commands**.

**Completed Courses:** Asynchronous JavaScript Programming, Backend Development with Node.js and MongoDB, React, Introduction to Neural Networks (creating a binary classification Neural Network).

## PROJECTS

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### CTO of Visual Backend ([www.github.com/vbackend/visual-backend](https://github.com/vbackend/visual-backend)):

- **Front End:** React with Sass | **Backend:** Express.js and MongoDB
- Added support for the IntelliJ IDEA IDE.
- Built a backend service to send emails to me and my co-founder when an account is created.
- Created a Chrome extension for LinkedIn with Supabase to manage leads with my co-founder.

### Personal Website ([www.jellyware.co.uk](http://www.jellyware.co.uk)):

- **Front End:** React with CSS | **Backend:** Node.js and MongoDB
- Created a backend with Express.js, that serves blog posts written in markdown and has endpoints to convert .docx files to HTML pages.
- URL shortener uses hashing for fast access to URLs and validates them with regex.
- Designed and built a modern and responsive website (supports mobile and desktop).
- Implemented database classes using the dependency inversion principle.

### Simple YouTube bot and Data gathering tool:

- **Used:** C# with WPF (UI Framework that uses XAML).
- Automated posting comments and subscribing to many YouTube channels.
- Used multithreading to keep processes running in the background, with a responsive UI.
- Used YouTube Data API library and OAuth 2.0 Authentication to access and push data.

### Smart Alarm clock with a Raspberry Pi (fetches the time from Google's NTP Server):

- **Used:** Python, creating scripts to program the time and sync it with the NTP server
- Used SSH and the Linux terminal, to connect and interact with the Raspberry Pi.

## PROFESSIONAL EXPERIENCE

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**(Volunteering) Zero Gravity Mentor** - Helping a student from a disadvantaged background get into a top University, by informing them and aiding decision-making on the application process, providing feedback and support. Improved my communication skills, both listening to them and coherently presenting ideas.