Richard Tjokroutomo

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EDUCATION

The Chinese University of Hong Kong, Shenzhen   *Shenzhen*, China
Computer Science and Engineering (cGPA 3.493, mGPA 3.829)   2021 – 2025 (expected)

- Recipient of half tuition entry scholarship
- Relevant coursework: Intro to CS: Programming Paradigms, Computational Laboratory, Digital Logic & Systems, Discrete Mathematics, Data Structures (now)

SKILLS

- **Programming**: C++, JavaScript, Python, Java, C# (limited proficiency)
- **Web & Databases**: HTML, CSS, MongoDB, MySQL
- **Frameworks**: Express, Bootstrap, React.js, ASP.NET MVC (web API), Django (limited proficiency)
- **Languages**: English (IELTS 8.0), Chinese (limited proficiency)

PROJECTS

OpenPost (Full-Stack)   [GitHub | website]

- Created OpenPost, a social media web application that lets users to post comments and view others' posted comments
- Implemented **OAuth2.0** using Passport.js that lets users to sign in with GitHub or Google account
- Utilized express-session, along with Passport.js, to implement **sessions** that keeps the user logged in
- Implemented **short polling** to check for new posts from another web API, openPostAPI
- Designed the entire website's concept and layout, including the user's dashboard, which enables the user to perform **CRUD** operations.
- Used: **Node.js, Express, MongoDB, Bootstrap5, HTML, JavaScript, Async API (async/await), EJS**

Stock API (Back-End)   [GitHub]

- Built a **REST API** which stores the user's stock portfolio (Ticker code, price, and quantity owned)
- Used **dependency injection design patterns** to encapsulate data access for possible database migrations
- Tested **CRUD** API endpoints with Postman & HttpRepl
- Used: **ASP.NET, C#, MongoDB**

Tic-Tac-Toe (Front-End)   [GitHub | website]

- Created a simple, fully responsive (for mobile and desktop), Tic-Tac-Toe game website
- Used: **React.js (state, props), JSX, CSS**

Smart Rack API (IOT)   [GitHub]

- Developed a web API used to connect Arduino (hardware) and the website (software)
- Used in a student project in Shanghai Jiao Tong university
- Used: **Node.js, Express, JavaScript, MongoDB**

MPU-6050 C++ Library (Arduino)   [GitHub]

- Developed a library for MPU-6050 (mounted on a GY-521 breakout module)
- Implemented a calibration method that involves obtaining the mean and standard deviation of the reading errors of the sensor in a flat position, which will then be used to obtain a more stable data on the sensor's orientation
- Used in another personal project which involves controlling an RC car with hand gesture
- Used: **C++ (Arduino)**

PERSONAL INFORMATION

- **Interests**: electronics, history, stock investing, anime, manga
- **Organization**: CUHK-SZ IEEE student branch