

# YETAEK (DAVID) HONG

## 3RD YEAR COMPUTER SCIENCE

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### TECHNICAL SKILLS

**Languages:** Java, Python, C, C++, C#, JavaScript, HTML/CSS, R

**Skills & Technologies:** React, MongoDB, MySQL, Django, Node.js, Git, Express.js, JSON, JUnit

### PROJECTS

**Concurrent Traffic** | Python, Pygame, Git, ClickUp | [GitHub](#) June 2024 - Present

- Developed a traffic-light-free road simulator to maximize intersection traffic flow efficiency for self-driving cars
- Participated in biweekly **Agile development** sprints, utilized ClickUp for task management, and engaged in weekly status meetings, supporting consistent project progression and team collaboration
- Created a function to compute vehicle direction at a route position using trigonometric calculations for straight and circular edges, with angle conversions to degrees
- Developed a function to update vehicle commands for maintaining safe distances and adjusting speeds, using kinematic equations for vehicles stopping behind each other
- Enhanced simulation flexibility by recreating traffic scenarios using JSON presets

**Sustainify (nwHacks 2024)** | React, JavaScript, HTML, CSS, Git, Figma | [GitHub](#) January 2024

- Created a React program that prompts users with daily eco-friendly challenges, aimed to contribute to global pollution reduction through achievable tasks and a reward system
- Led a team of four by performing thorough code reviews and ensuring high-quality standards before branch commits, enhancing project robustness
- Showcased strong communication skills by presenting the final product to judges, highlighting key project outcomes, discussing trade-offs between technologies, and addressing challenges faced
- Implemented the fetch API to facilitate POST requests to the **OpenAI API** endpoint, generating three random challenges each day

**Fridgey** | MongoDB, Express.js, React, and Node.js | [GitHub](#) April 2024

- Built a **MERN stack** refrigerator management system to tackle food waste caused by unnoticed expiration dates
- Implemented a barcode scanner with QuaggaJS and integrated it with a barcode API, simplifying item addition
- Designed and implemented a RESTful API using Node.js and Express.js for CRUD operations on grocery items

**LNFT (Let's Not Forget Today)** | Django, MySQL, Python | [GitHub](#) December – January 2024

- Developed a diary web application using Django framework due to its built-in features like form handling and authentication, leveraging MySQL for database management
- Implemented the MVC (Model-View-Controller) architecture pattern to strengthen code organization and scalability in web development

**Ingredient IQ (HackCamp 2023)** | JavaScript, HTML, CSS, JSON, Figma | [GitHub](#) November 2023

- Constructed a website enabling users to input a food item and receive alternative options with a comprehensive analysis, including pros, cons, and calorie content for each alternative
- Designed the website layout with clarity using Figma, and elevated visual elements through CSS

### EXPERIENCE

**Instructor** | UnderTheGUI | [Site](#) December 2020 – Present

- Led a 16-week Unity and Python course for over **80 students** aged 8 - 16
- Demonstrated strong initiative and adaptability; becoming the first volunteer to be hired as a paid instructor
- Topics covered: working with classes, functions and kinematic physics for game development

### EDUCATION

**University of British Columbia (Year 3)**

Bachelor of Science in Computer Science

Vancouver, BC

Expected Graduation April 2027