Janakitti Ratana-Rueangsri

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SKILLS

Languages: Python | C | C++ | TypeScript | HTML | CSS | SQL

Technologies: Angular | Bootstrap | Flask | Firebase | Unity | Qt | Arduino | Windows | Linux | Bash | Git
Figma | Adobe Illustrator | Motion 5 | Autodesk Inventor

EXPERIENCE

Software Engineering Co-op | Providius Corp. *May 2020 - Aug 2020*

- Reduced average CPU usage of a large-scale web app **by 24%** and enabled seamless integration with third-party vendor apps by developing a custom browser in **C++**, using **Qt** and **Chromium Embedded Framework**
- Built an **Angular** app using **Python**, **Flask**, and **Socket.io** to serve as a UI for Linux Traffic Control, making it more accessible to simulate practical network connections (packet drop, delay, etc.) for testing network products
  - Designed a modular and intuitive web interface using **Bootstrap** and **Angular Material**
- Developed a system for organizing GDrive files by generating filtered file trees on a webpage using **Google App Scripts**

Software Developer | Team 4308: Absolute Robotics (FIRST Robotics) *Sep 2017 - Apr 2019*

- Developed the computer vision pipeline to identify target objects on the playing field using **Python**, **OpenCV**, and **GRIP**
- Qualified as 2018 FIRST Robotics **World Championship Divisional Semi-Finalists**

PROJECTS

Virtrolio | TypeScript, HTML, CSS, Angular, Firebase *May 2020 - present*

- Worked with a team of 7 to create a web service that allows students to **virtually sign yearbooks during COVID-19**
- Developed a Pinterest-style front-end interface for viewing yearbook messages with **TypeScript**, **Angular**, and **Bootstrap**
- Implemented Firebase **Cloud Firestore** to allow users to privately sign and receive customized yearbook messages
- Led the design of the overall product **UI/UX** and promotional materials

FedoraField | C#, Unity *Oct 2019 - present*

- Developed a **C# Unity** game in which players interact with enemy projectiles and environment objects by putting them into orbit using simulated gravitational and magnetic fields
- Implemented audio track mixing based on player actions, creating an adaptive soundtrack for a unique experience

Tangible | C++, Arduino, Unity *Oct 2019 - Dec 2019*

- Built a 'universal touchscreen' accessory with **Arduino** ultrasonic sensors to enable touch screen capability on non-touchscreen monitors
- Programmed a finger-mapping system to process sensor inputs as taps and gestures on the screen
- Developed a small collection of touch-optimized **Unity** applets to demonstrate effectiveness of hardware

EDUCATION

Candidate for Bachelor of Software Engineering | University of Waterloo *2019 - 2024*

ACHIEVEMENTS

2019 - Schulich Leader Scholarship Canada ($80,000 value)

2019 - Ted Rogers Scholarship

2018/19 - 2-time DECA Ontario Provincial Champion

INTERESTS

- Currently taking ***Machine Learning*** course by Stanford on Coursera (taught by Andrew Ng)
- Graphic design
- Game design
- Guitar
- Filmmaking