# Francisco 'Tim' Oh

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## EDUCATION

**University of California, Irvine** **Jun. 2025**

- *B.S. in Computer Science & Engineering, 3.5/4.0 GPA*
- Engineering Student Council (ESC), Institute of Electrical and Electronics Engineers (IEEE), Theta Tau
- **Skills**: Python, C++, C, Java, HTML, CSS, JavaScript, SQL, VHDL, Arduino/Embedded Systems, Korean
- **Relevant Coursework**: Data Structure Implementation and Analysis, Network Analysis, Differential Equations

## TECHNICAL EXPERIENCE

**Flapping Wing Micro Air Vehicle |** *Software Engineer* **Apr. 2023 - Present**

- Leverage the BetaFlight framework to configure PID values of flight controllers of "QuadFlapper" drones
- Compare wing performance collecting maximum thrust and minimum power values through **LabVIEW**
- Develop a **computer vision** machine learning model to detect wind vortices forming behind drones' wings

**Guidance Glasses |** *Software Engineer* **Apr. 2023 - Jun. 2023**

- Trained a **YOLOv5** machine learning model for smart glasses helping the visually impaired cross city crosswalks
- Created a custom **Roboflow** image recognition dataset differentiating "Walk" and "Don't Walk" classifications
- Achieved a mean average precision (mAP) value of 97.6% for detecting "Walk" and "Don't Walk" lights
- Programmed an algorithm to simultaneously integrate data from a camera, ultrasonic sensor, and microphone
- Integrated a cross-platform solution with the algorithm on **Python** and the haptic motor circuit on **Arduino** to enable the glasses to provide real-time instructions through haptic feedback

**IEEE Open Project Space (OPS) |** *Electrical Engineer* **Sep. 2021 - Jun. 2022**

- Engineered a gyro-controlled remote control car with a custom PCB designed on **KiCad**
- Deployed the iPoduino, an Arduino circuit that allows users to choose and play music through speakers
- Delivered a synchronous Red Light, Green Light game that utilized the Universal Asynchronous Receiver Transmitter (UART) protocol to communicate randomly generated stoplights between two **Arduinos**

**Shoe-thbrush |** *Team Lead* **Sep. 2021 - Jun. 2022**

- Devised "Shoe-thbrush," an automatic shoe sole cleaner with an original eco-friendly cleaning solution to compete in the ESC Leaders in Freshmen Engineering (LIFE) Tank Engineering Competition
- Led a team of 5 by appointing roles, organizing meetings, and facilitating the exchange of ideas & information
- Manufactured a working prototype with a custom DC-circuit motor system, cardboard boxes, and elastic bands

## WORK EXPERIENCE

**The Coder School,** *Irvine, CA* **|** *Coding Coach* **Oct. 2022 – Sept. 2023**

- Coached 20 students ages 8 to 18 weekly on how to think like a programmer in **Python** and Scratch
- Ensured high-level engagement and understanding with customized curricula tailored to each student's needs
- Drafted students' progress reports and lesson notes punctually for clients and Coordinators after every lesson

## EXTRACURRICULARS

**Engineering Student Council |** *Director of Corporate Affairs* **Oct. 2022 – Present**

- Hosted EngiTech, a virtual career fair, to connect a yearly average of 100+ students & 13+ different companies
- Coordinated Networking Dinner Night, an in-person dinner event between 64 students and 9 companies
- Organized 8 workshops catering to professional development with an average audience of 20-30 people
- Arranged two company-specific events: a Northrop Grumman panel and a Skyworks Solutions company tour