

# Jonathan Padungyothee

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## EDUCATION

### University of California: San Diego - 3.92 GPA

La Jolla, CA

*Bachelor of Science in Computer Science*

*Jul. 2019 – Jan. 2023 (expected)*

- **IDEA Scholar:** scholarship awarded to **approximately 3% of students** based on academic excellence
- **Provost Honors:** awarded to undergraduate students based on academic excellence in previous quarters
- **Coursework:** Intro to CS: Java, Advanced Data Structures: C++, Computer Organization & Systems Programming, Digital Systems & Logic Design, Intro to Computer Architecture, Database System Principles

## EXPERIENCE

### UCSD Computer Science and Engineering Department

Sept. 2021 - Present

*Computer Science Tutor*

*La Jolla, CA*

- Serve as student tutor for CSE140 (Components & Design Techniques for Digital Systems) course to **200+ undergraduate students**
- Teach concepts such as combinatorial and sequential logic, k-maps, state machines, logic timings, and the application of logic design in hardware systems in office hours and grade student work

### UCSD Computer Science and Engineering Department

Oct. 2020 – Jun. 2021

*Undergraduate Researcher - Systems and Networking*

*La Jolla, CA*

- Discrete Network Simulation for Topology Verification
- Developed **optical network** components in **ns-3** to simulate a newly proposed dynamic network topology
- Evaluated network's performance in high-bandwidth tasks, performance in low-latency tasks, and cost-effectiveness
- Explored the consequences of **data center scalability** and its impact on the environment

### UCSD Jacobs School of Engineering

Aug. 2020 – Sep. 2020

*Peer Facilitator*

*La Jolla, CA*

- Worked in a **team of 17** to supervise **375+** IDEA Engineering Student Center's Summer Prep participants
- Planned and implemented non-classroom activities including, but not limited to, virtual and remote events
- Aided in community development with a focus on creating an environment conducive to the academic, intellectual, multicultural, and social development of all members of the community
- Helped establish respectful and trusting relationships among students, program staff, and instructional staff

## PROJECTS

### Eye-Watch Inc. | *Python, Arduino, 3D Printer*

Jul. 2019 – Aug. 2019

- Created a hands-free device to help alert the visually-impaired to close obstacles
- Used an ultrasonic sensor placed at the front of the shoe to signal the Arduino, housed in a containment anklet, to trigger vibration motors
- Demoted the project at a final presentation event attended by UCSD faculty

## INVOLVEMENT

### Korean American Student Association

Dec. 2019 – Present

*Membership Coordinator / Academic Advisor*

*La Jolla, CA*

- Host events weekly for general member engagement and entertainment
- Manage Big/Little Program with membership pairings and exclusive events

### EnVision Arts and Engineering Maker Space

Aug. 2019 - Dec. 2019

*Volunteer Supervisor*

*La Jolla, CA*

- Assisted students in importing SOLIDWORKS files into the **3D printer**, cleanly **soldering** their circuits, and preparing the **laser cutter** for rastering and vectoring on various materials
- Troubleshoot and fixed problems students may encounter with the space's tools
- Volunteered for three hours a week to help **50+ students** in Intro to Electrical Engineering

## SKILLS

**Languages:** C++, C, Java, Python, Bash, LaTeX, HTML, JavaScript, CSS, SQL, MATLAB, ARMv6 Assembly, R

**Developer Tools:** Linux, GDB/Valgrind, Makefiles, ns-3, Git, Google Cloud Platform, VS Code, Markdown, IntelliJ

**Interests:** Choreographed Dancing, Long-Distance Running, Basketball, Video Editing, Chess, Video Games