

# Dylan Vu

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## EDUCATION:

### University of California, Santa Barbara (UCSB)

Expected Graduation: Jun. 2024

- Chemical Engineering (B.S.) | Prospective Computer Science (B.S.) GPA: 3.88

#### Selected Coursework:

Data Structures, Object-Oriented Design, Discrete Math, Linear Algebra, Differential Equations

## SELECTED PROJECTS:

### F•sync (HackHarvard 2021 Hackathon Submission)

Oct. 2021 - Present

- Awarded “Most Creative Hack Using Twilio” for a sustainable inventory software brands and retailers to manage clothing stock
- Engineer backend using Express, Socket.IO, and Twilio API to connect clients and a custom account login and authentication workflow using JSON Web Tokens (JWT)
- Design MongoDB database schema and program database query and updating functions to synchronize and manage global inventory across retailers and brands

### Geoverse (CalHacks 2021 Hackathon Submission)

Oct. 2021

- Created Mobile Application and Widgets using Flutter for a hybrid text adventure geolocation fitness app
- Utilized Spiral Agile Development principles and participated in standups to increase team productivity

### GRIP Board (Pinnacle Hackathon Submission)

Sep. 2021

- Developed a smart projector device to simultaneously draw on the projector and online at Pinnacle, a hackathon for the winning teams of the top 50 largest collegiate hackathons across North America
- Implemented camera calibration for computer vision portion for accurate, 1-to-1 drawing on the Pygame canvas and coded the Python Socket.IO to broadcast smart projector canvas to other devices online

### GRIP Controller (LA Hacks 2021 Submission)

Mar. 2021

- Awarded 1<sup>st</sup> Place overall in LA Hacks and “Best in Track” for a novel responsive tactile VR controller
- Engineered hand-controller movement and object interactions in Unity using coordinates from MediaPipe
- Designed interactive Unity VR scene and implemented game physics using Unity’s built-in physics system

## LEADERSHIP:

### Webmaster, UCSB Robotics Club

Jun. 2021 - Present

- Plan, design, code, and maintain club website using React.js and custom components
- Maintain and update Node.js “Discord Question of the Day” bot to engage both AIChE and Robotics members

### Internal Department Chair, American Society of Chemical Engineers (AIChE)

Oct. 2020 – Jun. 2021

- Initiated a webscraper project to gather availability of any user specified UCSB course using Selenium
- Employed Openpyxl to consolidate and export course availability data to Excel for any student to view, allowing them to better plan and register for their major and general education courses in the future
- Coded Discord bot to engage club members with questions of the day using Node.js, Discord.js, and MongoDB

## TOOLS & FRAMEWORKS:

- **Programming & Technologies:** JavaScript, Node.js, Python, HTML, CSS, Git, C++, MATLAB, Flutter, C#, Unity
- **Frameworks & Libraries:** React, Express, Socket.IO, MongoDB, Discord.js, JWT, Firebase, Heroku, Selenium