

# Dylan Vu

Sacramento, CA • (916) 837-6779 • dylanvu9@gmail.com • vu-dylan.github.io/ • linkedin.com/in/dylanvu9

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## EDUCATION:

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

Expected Graduation: Jun. 2024

- Chemical Engineering (B.S.) | Honor's College

GPA: 3.88

• **Selected Coursework:**

Intro to C++, Discrete Math, Data Structures, Linear Algebra, Differential Equations, Multivariable Calculus

## SELECTED PROJECTS:

**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 SocketIO to broadcast smart projector canvas to other devices online
- Led integration of OpenCV code with Pygame drawing code

**GRIP Controller (LA Hacks 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

**SketchedOut (SacHacks III Hackathon Submission)**

Feb. 2021

- Collaborated with 2 other students to create a React whiteboard for users to draw together online
- Implemented backend using Express NodeJS and Socket.IO to connect clients and send whiteboard updates
- Programmed React hooks to initialize client-side sockets and save whiteboard state to transmit to backend

**SeenIt (Coders SB React Workshop Project)**

Jan. 2021 – Mar. 2021

- Managed team of 4 other students to create a movie-centered social network React web app
- Created React components to display movie information and user-favorited movies

## LEADERSHIP:

**Webmaster, UCSB Robotics Club**

Jun. 2021 - Present

- Plan, design, code, and maintain club website using React.js
- 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/Github, C++, MATLAB, C#, Unity
- **Frameworks & Libraries:** React, Express, Socket.IO, Heroku, Firebase, Selenium, MongoDB, Discord.js