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
- Advance Hackathon proof-of-concept into prototype for a pre-seed stage startup
- Engineer entire backend using Express, Socket.IO, and Twilio API to connect clients and program API routes in Express for a custom-designed 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 1st 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
- 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