

# Vijit Dua

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Portfolio: <https://vjiitdua.com/>

## Education

### University of California, Davis

Sept 2023 – December 2026 (Expected)

Bachelors of Science, Computer Science

- Dean's Honor List (Fall 2023), Member of Davis Competitive Programming Club
- On Pace to Graduate Early

### University of Hong Kong [HKU]

Sept 2024 – December 2024

Semester Exchange

## Languages & Tools (bold = highly experienced)

- Languages: **JavaScript/Node.js**, TypeScript, C++, C, Python, Java
- Frameworks & Tools: **React.js**, **React Native**, Expo, **Express.js**, FastAPI, Django, **Material UI**, HTML, CSS
- Databases: **PostgreSQL**, **MySQL**, Sequelize, MongoDB, SQLite, Firestore
- Dev. Ops: **Git**, **GitHub**, Docker, GitHub CI / CD, AWS (EC2 & Cognito), Firebase, NGINX, Cloudflare
- Machine Learning: PyTorch

## Experience (blue = links)

### KAIST (Korea Advanced Institute of Science & Technology) | Deep Learning Research [\[research paper\]](#)

July 2024 - July 2024

- **Selected among 18 students worldwide** for the prestigious summer research program at KAIST, focussing on deep learning research.
- Developed **UNet** and **Attention UNet** models to **automate road infrastructure detection** using satellite imagery, aimed at reducing manual labor in road mapping.
- Achieved a strong **0.73 F1 score** on the final model.
- Curated and preprocessed data from datasets like Massachusetts and SpaceNet, correcting known errors for model enhancement.

### Icarus Development

- Team Lead – Web Development July 2024 - September 2024
  - Led a team of **six software engineers** and one designer, in a fast-paced startup environment.
  - Delivered **first deployment in 14 days**, ahead of 1-month timeline.
  - Worked as a **full-stack engineer**, utilizing **React.js** & **Material UI** for front-end development, alongside **Node.js** (primarily) & **Python** for back-end development.
  - Maintained **automated deployment pipelines** through **GitHub CI**.
  - Managed **Linux server deployment** with **NGINX**, overseeing **Cloudflare** configurations.
  - Developed **internal tools** including a web admin panel & custom Discord bot integrated with a **Node.js CRUD backend** for streamlined administrative features for team management.
- Mobile Developer Intern June 2024 - July 2024
  - Served as primary developer for Davis Dot, a social app designed to unite users over deep, personalized interests.
  - Built using TypeScript and **React Native** with **Expo** to develop for both **iOS** & **Android** platforms.
  - Demonstrated strong skills during project that led to quick transition into leading the Web Development Team & enhancing internal tools.

### SchoolHouse.world – Volunteer Peer Tutor [\[portfolio & reviews\]](#)

August 2022 - January 2023

- Tutored students in AP Physics & SAT
- Received **98% positive ratings** among a total of **190+ ratings**
- Ranked "**Most Helpful Tutor of the Week**" **5 times consecutively**
- Helped a student improve from barely passing his class to achieving full marks on in-class quizzes.
- Audited sessions to measure quality and safety.

## Projects & Activities (blue = links)

### InnoGreet – Collaborative Innovation Platform [\[webpage\]](#)

September 2024 - January 2025 (Expected)

- **Leading the team**, including development, for a platform aimed at connecting & providing resources to individuals seeking collaboration on innovative projects.
- Currently a project with the potential to transition into a startup based on beta launch success.
- **Technologies** – JavaScript, React.js, Material UI, Node.js, Express.js, PostgreSQL, MongoDB (Messages only), Sequelize, Passport.js, NodeMailer.

### TeamSync | In Progress – Streamlined Team Management [\[github\]](#)

September 2024 - October 2024 (Expected)

- An app aimed at streamlining administrative tasks & member management, particularly Discord-based teams.
- Implemented **RESTful APIs** and enabled public data display through simple GET requests for web integrations.
- Created a **React.js** web client, **Discord.js** Discord bot, and a Node.js **Express.js** backend.
- Additional Utilities: Passport.js, **Sequelize.js**

### TaskUp | HackDavis '24 – (Full Stack) Competitive Task Tracking App [\[github\]](#), [\[demo video\]](#)

April 27, 2024 - April 28, 2024

- Collaborated in a **team of four** to develop and launch TaskUp within **24 hours** during HackDavis 2024 (yearly UC Davis hackathon).
- Integrated competitiveness & collaboration into a task management app.
- **Led backend development**, using **Express.js**, Node.js, & MySQL.
- Contributed to frontend by implementing API communication, and key UI components with React & Material UI.
- DevOps & hosting: AWS EC2, Docker, NGINX, Cloudflare (SSL, DNS)

### TicTacToe – (Full Stack) Multiplayer Webgame [\[github\]](#)

March 2024 – April 2024

- Full-stack tic-tac-toe game **supporting player vs. player matches** over the internet.
- Frontend – **React** & **Material UI**; Backend – **Node.js**, **Express**, **MySQL**. DevOps & hosting: AWS EC2, Docker, nginx, certbot (SSL), AWS Route 53 (DNS)

