

# Vats Narsaria

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## Education

### University of California San Diego

Expected June 2026

Bachelor of Science in Computer Science (GPA: 3.80 / 4.00)

San Diego, CA

- **Relevant Coursework:** Recommender Systems and Web Mining, Software Engineering, Advanced Data Structures, Design & Analysis of Algorithms, Computer Organization & Systems Programming, Econometrics

## Experience

### ESB.AI Lab

September 2024 – Present

Research Assistant

San Diego, CA

- Contributing to the design and development of a Swift-based mobile app for farmers to capture crop images and collect metadata for machine learning models.
- Implementing backend integration to utilize machine learning models for processing and analysis of collected data.

### We Care Insurance

July 2024 – October 2024

Front-End Developer Intern

Omaha, NE

- Collaboratively developed the front-end of an insurance management system and led the migration of over **5,000 lines of code** from **JavaScript** to **React**.
- Designed and implemented key components, including the **login page**, **signup page**, and **user dashboard**
- Utilized **Bootstrap** for styling and **Axios** for API integration to handle user authentication and data retrieval.
- Tested APIs using **Postman** and ran containerized applications with **Docker/docker-compose**, streamlining development workflows.
- Managed version control for a team of developers using **Bitbucket**, ensuring smooth collaboration and deployment.

### IT Services, UCSD

September 2023 – Present

Field Technician

San Diego, CA

- Provided technical support for over 1,800 workstations across instructional labs, assisting faculty, staff, and students with hardware and software issues.
- Streamlined asset management and work order tracking using **ServiceNow** and **Maximo**.

### UCSD Computer Science Department

September 2023 – December 2023

Instructional Assistant

San Diego, CA

- Tutored **CSE8A: Introduction to Python Programming**, supporting over **500 students** in mastering foundational programming concepts, including loops, functions, and data structures.
- Provided individualized guidance during office hours, clarifying complex topics and fostering academic success for a diverse cohort of learners.

## Projects

### Roommate/Suite Management Web App | React, Next.js, Firebase

- Designed and developed a web app to help UCSD students manage shared living spaces, featuring profile management, task tracking, calendar integration, and a points-based system for gamified task completion.
- Built the frontend using **React** and **Next.js**, integrating **Firebase** for data storage and **Tailwind CSS** for responsive styling.

### Model Rocket Avionics System | Arduino, Kalman Filter, SolidWorks

- Designed, constructed, and launched a G-class model rocket with an advanced avionics system using **Arduino Nano** and sensors to measure altitude and acceleration.
- Implemented a **Kalman filter** for enhanced data accuracy and automated parachute deployment, improving descent control and ensuring reliable recovery.
- Contributed to **CAD development** in **SolidWorks**, simulation setup, and avionics programming, ensuring a successful launch and recovery.

## Technical Skills

**Languages:** JavaScript, Java, Python, HTML/CSS, TypeScript, C++, Arduino

**Libraries:** React.js, Bootstrap, Tailwind CSS, Node.js

**Development Tools:** Docker, Postman, ServiceNow, Version Control (Git)