VAIBHAV SATISH

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EDUCATION

Bachelor of Science, Computer Science — Irvine, CA
University of California, Irvine — *Aug 2024 - Mar 2027*
- **GPA:** 3.861
- **Achievements:** Dean's Honors List (**6/6** consecutive academic quarters)

WORK EXPERIENCE

Software Developer Research Assistant — Irvine, CA
UC Irvine Charlie Dunlop School of Biological Sciences — *Mar 2026 - Present*
- Architected a full-stack cognitive research game for the MindCycle application, advancing the asset into active user testing and clinical research trials.
- Initiated development on a second application game, engineering modular components to support upcoming simulation pipelines.
- Collaborated with the **UCI SLEEP Lab under Dr. Katherine Simon** to build **data pipelines**, tracking **4+** core behavioral metrics via backend logging.

Software Development Co-Lead — Irvine, CA
MedTech@UCI — *Sep 2024 - Present*
- Co-lead a cross-functional team of **5 engineers** using **Unity** and **C#** to develop a pediatric cognitive analysis app with image-recognition and memory tools, enabling earlier detection of cognitive delays.
- Designed interactive cognitive games using **React.js** and **JS**, delivering therapeutic interfaces for dementia and Alzheimer's patients.
- Engineered a **React metrics-tracking engine** to capture **15+** core cognitive metrics, providing clinicians with actionable analytical insights.

Software Development Intern & Instructor — Seattle, WA
Tech Academy of Minnesota — *Jun 2025 - Aug 2025*
- Delivered **full-stack curriculum** to **18 students**, guiding end-to-end web app development using **Python**, **HTML**, **CSS**, and **JS**.
- Formulated structured **debugging frameworks** and **12** lab exercises, accelerating core engineering and algorithmic problem-solving.
- Translated complex **software engineering paradigms** into digestible concepts, optimizing delivery to boost student project completion rates to **100%**.

Artificial Intelligence Researcher — Remote
Stanford University, Georgia Tech, UC San Diego & Cornell University — *May 2023 - Nov 2023*
- Developed, trained, and tuned multi-modal predictive models—including **Softmax Regression** and **DNNs**—using **PyTorch** and **Scikit-Learn** to analyze NFL datasets, improving predictive accuracy by **14%** over baseline models.
- Trained **3+ TensorFlow** and **Scikit-Learn** models to demonstrate computer-vision applications in detecting distracted driving and achieved **80-85%** accuracy.
- Engineered high-dimensional feature preprocessing pipelines using **Pandas** and **NumPy**, cutting down processing latencies and streamlining next-stage development timelines by **25%**.

PROJECTS

ZOTNest - UC Irvine's 2026 IrvineHacks Hackathon — Feb 2026 - Present
React, Python, FastAPI, Leaflet
- Developed a **full-stack property search web app** to streamline housing discovery for **30,000+** UCI students.
- Integrated **Leaflet map API** to deliver seamless, real-time location mapping and interactive visualization of **30+** local properties.
- Engineered **multi-criteria filtering algorithms** to compute dynamic property recommendations based on custom user vectors.
- Built a **Python data pipeline** to scrape and parse **500+** Google Maps reviews, transforming raw text into qualitative UI insights.

Driver Delineation - UC Irvine's 2025 Datathon — Apr 2025
Python, PyTorch, TensorFlow, Scikit-Learn, NumPy
- Trained supervised **ML models** using **PyTorch** and **Scikit-Learn** to predict driver likelihood from high-dimensional datasets.
- Executed **feature engineering** on **40+** impact variables to minimize model overfitting and boost generalizability.
- Designed a multi-layer **Deep Neural Network (DNN)** in **TensorFlow**, tuning hyper-parameters to hit a **90%** validation accuracy.

UCI Themed Geoguessr — Dec 2024 - Present
React, Node.js, TypeScript, C++, Crow API, Vercel
- Led a **4-person** engineering team from **system architecture ideation** through deployment, managing structured Git workflows.
- Implemented custom **mathematical scoring algorithms** and integrated **OpenStreetMap APIs** for sub-second asset rendering.
- Architected an asynchronous **C++ backend** using **Crow API** to minimize gameplay latency and handle concurrent asset updates.

TECHNICAL SKILLS

Languages: Java, **Python**, **C++**, SQL, **TypeScript**, **JavaScript**, C#, HTML/CSS
Frameworks & Tools: **React**, Node.js, Next.js, **FastAPI**, **REST APIs**, **PyTorch**, **TensorFlow**, **Scikit-Learn**, **Git**, Unity
Methodologies & Domains: **Agile/Scrum**, **CI/CD**, **System Architecture**, Product Roadmaps, UX Research
AI Specializations: **Supervised/Unsupervised Learning**, **NLP**, **Computer Vision**