Devanshi Jain

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EDUCATION

University of California, San Diego — Sep 2021 – Jun 2025

B.S. Applied Mathematics & Computer Science — *Pursuing a PhD in CSE from 2025 to 2029*

Relevant Coursework:

- **Graduate:** AI - Probabilistic Reasoning, ML - Supervised & Unsupervised Learning, Search & Optimization
- **Undergraduate:** Web Development, Object Oriented Programming in Java, C++, Computer Operating Systems

WORK EXPERIENCE

School of Medicine: Division of Biomedical Informatics — Dec 2023 – Present

Web Developer

- Developing a web application utilized by 120+ patients to analyze memory retention in those dealing with sleep apnea.
- Technologies used: Angular, Typescript, Babel, Git, CSS, HTML5

Center for Energy Research — Sep 2022 – Present

Software Engineering Intern

- Improved energy efficiency by 20% in 9+ buildings thru a robust scheduler optimization for smart on/off control algorithms.
- Collaborated closely in an Agile workflow with the tech lead and PM to drive code reviews and thorough testing using Jest.
- Building a custom API-driven server for advanced data management, querying, and migrating data from InfluxDB to Neo4j.
- Adhered to best practices for 1+ year, prioritizing clear communication, accessibility, and effective dependency management.
- Technologies used: Python, Numpy, Pandas, Seaborn, Matplotlib, Git, React, JS, Node.js, MongoDB, Neo4J, Docker, Bash

Computational Modelling & Flow Physics Lab — Jun 2023 – Aug 2023

Student Researcher

- Achieved an efficiency enhancement of 12.5% for NASA's GE90 engine through non-linear optimization in Ansys.
- Utilized 200,000 high-performance computing hours on San Diego Supercomputer for CFD simulations with 10k parameters.
- Presented at the 2023 SCCUR Annual Conference at CSU Fullerton and the Summer Research Conference at UCSD.

Kastner Research Group — Nov 2021 – Jun 2023

Embedded Systems Lead

- Developed an autonomous underwater vehicle, optimizing hydrophone arrays for signal perception and precise navigation.
- Enhanced real-time audio analysis accuracy by 15% by implementing C++ signal processing algorithms into sub's controls.
- Qualified for semi-finals of the Robosub 2023 Competition held in San Diego out of 35 teams representing 5 countries.

COSMOS - 'Hacking for Oceans' Program — Jun 2022 – Jul 2022

Teaching Assistant

- Led a 6-week long lab section of 25+ students in developing autonomous boats with sensors to collect oceanographic data.
- Instructed students in configuring long range microcontrollers in C++ to enable networking and telemetry over 4 miles.
- Directed students in programming GPS navigation and real-time sensor data visualization to actively monitor water quality.

PROJECTS

FreeCodeCamp.org

- Contributed to the open-source codebase by fixing 15+ issues, including writing Node.js and JavaScript features' test files .
- Updated 30+ dependencies and resolved a critical issue in the learning platform's curriculum by fixing hotkey interference.

LEADERSHIP EXPERIENCE

IEEE at UCSD: Leading 6+ workshops as Technical Chair like one focussing on Naive Bayes Classifier for 25+ students.
Society of Undergraduate Mathematics Students: As VP, organized and hosted 10+ workshops for 30+ students.
Extra-Curriculars: Member of Golf Club, Squash Club, Tennis Club, Chess Club, Pursuing Private Pilot's License.

TECHNICAL SKILLS

Languages: C/C++, Python, MATLAB, Java, C#, .NET, Javascript, HTML5, CSS, Objective-C, Shell, Bash, PHP, Pearl
Developer Tools: Git, Linux, Apache, MySQL, AWS Cloud Practitioner, Azure, Docker, Kubernetes, GDB, Pytorch, Jest
Frameworks: React.js, Node.js, Angular.js, Express.js, MongoDB, Flutter, Next.js, RESTful APIs, FastAPI, PostgreSQL