Naman Satish

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Education

University of California, Berkeley : Electrical Engineering & Computer Science BS May 2025

- **Regents' and Chancellor's Scholar**, Merit Scholarship given to top 2% of undergraduates
- **Courses: CS61A**(The Structure and Interpretation of Computer Programs), **CS61B**(Data Structures), **CS170**(Efficient Algorithms and Intractable Problems), **CS189**(Introduction to Machine Learning), **CS161**(Computer Security), **CS61C**(Great Ideas of Computer Architecture)

Technical Skills

Languages: **Python**, **Java**, Type/**JavaScript**, **Golang**, C, RISC-V, *PHP*, *C#*, *SQL*
Tools: **TensorFlow**, **Pytorch**, **Numpy**, **Pandas**, **FSL**, React, Django, JUnit, *Vue.js*, *Node.js*

Technical Experience

Undergraduate Researcher Sep. 2023 – Current

University of California, San Francisco - Roland Henry Laboratory : https://henrylab.ucsf.edu/ *San Francisco, CA*

- Developing deep learning models to describe aging and disease processes in Multiple Sclerosis pathology to create a clinically-reinforced statistical model of Percent Brain Volume Change.
- Research focus on the application of GNNs in to model deformations of cortical surfaces to generatively predict future brain surface changes.

Chief Technology Officer April 2023 – Current

Berkeley Model United Nations : bmun.org *Berkeley, CA*

- Documenting and improving our open-source Django/React conference management application.
- Educating mentees on software development and working on large projects.
- Improving document intake pipeline with plagiarism detection to automatically flag research papers.

Cybersecurity Intern June 2023 – Aug. 2023

iTradeNetwork : https://www.itradenetwork.com/ *Dublin, CA*

- Created Crowdstrike analysis flows to assess vulnerabilities across the organization and calculate risk scores to quantify danger.
- Presented data-driven recommendations and strategies to the CISO for mitigation and risk reduction.
- Implemented automated tracking of penetration testing findings to improve average response time, and provided insight into the severity of findings and solutions.
- Managed adherence to CIS benchmarks and developed goals for engineering teams to improve infosec posture.

Academic Intern June 2023 – Aug. 2023

CS 61BL Data Structures *Berkeley, CA*

- Provided individualized support to 30+ students in bi-weekly lab sections.
- Adapted teaching style to each student, and provided guidance in implementing algorithms and data structures.

Projects

E2EE File Sharing | *Golang, E2E Encryption, Penetration Testing*

- Enabled secure file sharing on unsafe data storage services using RSA, Digital Signatures, and HMACs.
- Performed penetration and fuzz testing to ensure malicious users would be unable to violate file permissions.

Gitlet – Git-like Version Control | *Java, Git*

- Developed a Git-equivalent version control system in Java, with enhanced traceability, branching, and search.
- Implemented a merge algorithm to resolve commit conflicts utilizing Bidirectional Breadth-First Search.
- Leveraged data structures, including tree structures, SHA-1 hashes, and serialized sets, to improve performance.

Percent Brain Volume Change Modeling - Lead Researcher | *Python, Pytorch, Statistical Modeling, Clinical Research*

- Utilizing deep learning techniques in conjunction with clinical models of neurological cortical morphology to model the affect of age on brain volume change.
- Designing model architectures to predict brain surface movement of noisy MRI data using SIENA psuedo-labels.
- Replacing the current standard in Multiple Sclerosis pathology with a clinically-reinforced deep learning model.