

Suhrit Padakanti

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EDUCATION

University of California, Santa Barbara
Bachelor of Science in Computer Science | GPA: 3.9

Santa Barbara, CA
Expected June 2026

EXPERIENCE

Software Engineer Intern

UCSB ITS

Apr 2025 – Present

Santa Barbara, CA

- Engineered and automated the deployment of a containerized identity management platform (CManage) on AWS, leveraging Terraform for infrastructure as code (IaC) to serve over 30,000 students, faculty, and staff.
- Architected a scalable AWS environment from scratch, utilizing VPCs, IAM roles, and security groups to protect sensitive identity data while orchestrating the migration strategy for all campus user records into AWS RDS.

AI Research Engineer – DYNAMO Lab

University of California, Santa Barbara

Sep 2024 – Apr 2025

Santa Barbara, CA

- Built an end-to-end fMRI-to-image pipeline for the 9,840-scan THINGS dataset, reducing data preprocessing time by 40% by implementing a novel adapter alignment module to map brain signals to the CLIP latent space.
- Resolved critical image reconstruction failures by implementing a greedy image selection algorithm, boosting final image fidelity by 32% (SSIM) over the initial baseline and eliminating color artifacts across 1,200 test instances.

Software Security Engineer – Computer Verification Lab

University of California, Santa Barbara

Sep 2023 – Jun 2024

Santa Barbara, CA

- Led a team of 4 to engineer a novel static analysis engine, S.T.A.S.E., integrating cclzyzer++ and KLEE to analyze LLVM bitcode, which cut path explosion in symbolic execution by 65% compared to traditional methods.
- Generalized the tool from EDK-II firmware to generic C programs, validating it against the 64,000+ test cases in the Juliet Test Suite and achieving a 95% true-positive rate across 4 critical vulnerability classes.

Software Engineer Intern

Makonis

Jun 2023 – Sep 2023

Remote

- Architected a Python video retrieval engine with a Flask RESTful API for over 10,000 users at a university; implemented a custom NLP pipeline using BERT models that enhanced search result accuracy by 40%.
- Developed a React/Redux frontend with Material-UI components and containerized the multi-service application with Docker Compose, deploying to AWS EC2 behind an Elastic Load Balancer to cut user search time by 30%.

Founder

Orama

Sep 2022 – Jun 2023

Santa Barbara, CA

- Engineered a medical device using computer vision, ML to detect neuro-degenerative diseases via eye movement.
- Achieved 95% model accuracy during validation by analyzing existing data from hundreds of Alzheimer's patients.
- Conducted market research with 50+ medical professionals to validate a \$500M market and build GTM strategy.

PROJECTS

SWE-bench Agent | *Python, OpenAI API, GPT-4o-mini, Docker, Git*

- Developed an AI agent using GPT-4o to autonomously generate code patches for software engineering problems.
- Achieved a 12.7% pass rate on the SWE-bench harness, establishing a baseline for model and prompt refinement.

Kindness Kart | *React, Node.js, AWS, SQL, MongoDB, Swift, Java, Git*

- Won the Best Environmental Hack prize at SBHacks by engineering a platform for 7 hotels and 2 NGOs.
- Developed native iOS/Android app and a website with a backend on MongoDB, cutting logistics time by over 50%

Custom Programming Language Compiler | *C++, Flex, Bison, Data Structures, Algorithms*

- Designed a highly efficient lexer and parser to support dynamic variables, conditionals, loops, and functions.

TECHNICAL SKILLS

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

Frameworks & Tools: Node.js, React, Git, Docker, CI/CD (Jenkins, GitHub Actions), REST APIs, PyTorch