

# Suhrit Padakanti

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## EDUCATION

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

Santa Barbara, CA  
*Expected June 2026*

## EXPERIENCE

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**Software Engineer Intern**  
*UCSB ITS*

Apr 2025 – Present  
*Santa Barbara, CA*

- Engineered and automated the deployment of a containerized identity management platform (COmanage) 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

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**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

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**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