

Rohil Shah

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EDUCATION

Stanford University

Stanford, CA

Master of Science (M.S.) in Computer Science — NSF Graduate Research Fellow

Sep. 2026 – Jun. 2028

University of California, Santa Barbara (UCSB), College of Creative Studies (CCS)

Santa Barbara, CA

Bachelor of Science (B.S.) in Computer Science — GPA 3.98, CS Student of the Year, UC Regents Scholar

Sep. 2022 – Jun. 2026

Coursework: Neural Information Retrieval, Deep Learning, Distributed Systems, Operating Systems, Parallel Computing.

RESEARCH EXPERIENCE

UCSB Neural Information Retrieval Lab

Santa Barbara, CA

Research Assistant — Advised by Prof. Tao Yang

Oct. 2024 – Jun. 2026

- Designed hybrid sparse-dense embedding retrieval index architectures; full paper at **SIGIR '26** ([arXiv:2602.02883](https://arxiv.org/abs/2602.02883)).
- Evaluated retrieval scalability on **MS MARCO v2 (138M docs)** via ablations on the **Expansive** supercomputing cluster.
- Discovered and patched a critical distance-metric computation error for **HNSW** indexes in Meta's **FAISS (40k+ stars)**.

INDUSTRY EXPERIENCE

Google

Mountain View, CA

Software Engineer Intern

Mar. 2026 – Present

- Conceived and built contrastive-pairs benchmarks to evaluate **LLM-as-a-judge** for multilingual synthetic data generation.
- Engineered an automatic prompt optimization (**OPRO**) pipeline, increasing alignment to human labelers from **57%** to **92%**.
- Enhanced fine-tuning and evaluation dataset quality by **30%** by integrating calibrated auto-raters into agentic world model.

ChipAgents, Inc.

Santa Barbara, CA

AI Agent Engineer Intern

Jan. 2026 – Mar. 2026

- Designed and shipped an **Agent SDK**, enabling customers to build agents for silicon design tasks in **Python**, driving the product through conception, internal alpha, and general availability with rapid iterations on customer feedback.
- Developed **multi-agent workflows** for formal verification and an **agent-human collaboration platform** for testplan review.
- Enhanced core agent harness: context compaction, task management, workflow hooks, authentication in **TypeScript, React**.

NetApp, Inc.

San Jose, CA

Software Engineer Intern

Jun. 2025 – Sep. 2025

- Built and deployed an AI root cause analysis tool from scratch (**Python, LangChain**), used internally by **20+ engineers**.
- Delivered **10%** productivity boost on customer escalations by deriving actionable insights from gigabytes of raw system logs.
- Won Judges' Choice Award at NetApp's global internal hackathon (**1000+ participants, 300+ projects**) for intern project.

Inogen, Inc.

Santa Barbara, CA

Software Engineer Intern

Jul. 2023 – Sep. 2023

- Built wearable health tracker (Apple Watch, Fitbit, Garmin) integration into Inogen mobile app to surface user health insights.
- Designed human oxygen-response simulation, collaborating with Inogen R&D medical experts; included in FDA report.
- Developed **100+** embedded firmware tests in **C** from design schematics to verify device functionality on the production line.

SELECTED PROJECTS

Operating System Kernel (KOS) | C, Linux, UNIX, POSIX

Jan. 2025 – Mar. 2025

- Co-built a UNIX-style kernel for a MIPS R3000 simulator with multiprocessing, shell pipes, file descriptors, syscall handling, and memory partitioning; built a modular regression test framework; achieved top lab scores and **A+ (top 4%)** in the course.

Fault-Tolerant Chatbot with Multi-Paxos | Python, Gemini, TCP/UDP

Nov. 2024 – Dec. 2024

- Built a distributed Gemini chatbot using a replicated key-value store and Multi-Paxos consensus across three nodes to preserve conversational context through crashes, partitions, and hallucinations; earned full score and **A+ (top 4%)** in the course.

LEADERSHIP EXPERIENCE

Association for Computing Machinery (ACM) Student Chapter

Santa Barbara, CA

Founder; Co-President; Advisor

Oct. 2022 – Jun. 2026

- Founded UCSB's ACM chapter, growing to **600+ members, 30-person team**, and **20+ events** by unifying fragmented clubs.
- Launched research and competitive programming initiatives, connecting students to labs, ICPC, and sponsors (Google, PwC).
- Led **250+**-attendee Google recruiting event, faculty-student networking series, and a **\$2,000+**-prize React competition.