

Garv Goswami

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EDUCATION

• University of California, Berkeley

B.S. in Computer Science and Chemical Biology

Expected Graduation: May 2026

Aug. 2022 – Present

- **Relevant Coursework:** Structure of Computer Programming, Data Structures, Organic Chemistry, Discrete Mathematics/Probability Theory, Integrated-Circuit Devices, Optimization Models, Natural Language Processing, Efficient Algorithms and Intractable Problems, Computer Architecture
- **Student Organizations:** Medical Technology at Berkeley, Disabled Students Program, Yoga, Club Soccer

EXPERIENCE

• Google

Mountain View, CA

Incoming Engineering Intern

May 2025

• Amazon

Sunnyvale, CA

*Software Development Engineering Intern - **Skills:** Java, System Design, AWS, Testing*

May 2024

- **Integration & Load Testing:** Created Integration and Load Testing CI/CD frameworks for new FireTV Ad Stack plugins. Used Java to write tests on temporary Lambda compute to validate packages being added to version set.
- **Validation Pipeline for FireTV Ads Plugins:** Worked on validation pipeline to add packages to FireTV's Setu, Amazon's internal tool for ad customization. Programmed system monitoring tool in Java to obtain CPU, memory, and latency metrics during plugin integration testing across FireTV ad stack, only allowing addition of plugin to library if all benchmarks are met.
- **Request Propagation Funnel View:** Created Funnel View to visualize request and response loss across ad stack, so engineers could ascertain problem areas.

• Innovative Genomics Institute

Berkeley, CA

*Student Researcher: Ronda Lab - **Skills:** Protein Prediction Models, AlphaFold, Wet Lab Testing*

October 2024 - Present

- **Generative Models for De Novo Protein Design:** Fine-tuned ESM-2 on CRISPR-family proteins to generate novel, compact variants of the SpyCas-9 protein using a custom autoencoder model. Integrated AlphaFold for structural validation to identify high-confidence candidates.
- **Screening Platform for Prions:** Developed a machine learning-based platform to screen for prion-like candidates by combining generative modeling outputs with structural and sequence-based criteria.
- **Wet Lab Testing:** Evaluated designed proteins using cell-based assays, measuring green fluorescence as a reporter for functionality. Performed protein purification via His-tag affinity chromatography and thermal stability assays.

• Cair Health (YC23)

San Francisco, CA

*Full-Stack Development Intern - **Skills:** JavaScript, Python, C++, AWS S3, Frontend Development* *January 2024 - May 2024*

- **FHIR Server for Secure Patient Data Storage:** Developed and deployed a FHIR server as part of the backend infrastructure to securely store and manage patient data for hospitals. Leveraged FHIR standards to ensure data interoperability across healthcare systems while maintaining compliance with HIPAA and other data security regulations. Worked on integration with hospital EHR systems using Redox.
- **RAG Interface:** Led development of front-end interface for RAG model used in hospital billing offices. Implemented query pre and post-processing & response streaming using TypeScript for React. Collaborated with design boutique to execute Figma design and component enhancements using React, TailwindCSS, and an analytics dashboard powered by Chart.js.

PROJECTS

- **AI-Driven Patient Pre-Visit Workflow Optimization:** Led creation of patient engagement system using Amazon Connect Flow w/ Amazon Lex for conversational abilities, implementing serverless AWS Lambda functions with Azure OpenAI API. Optimized patient experience through automated pre-appointment calls, utilizing NLP algorithms for intelligent patient journey optimizing.
- **Alzheimer's Memory Storage Web Application:** Led creation of application stemming from the UCSF Alzheimer's Research Experience. Leveraged Next.js, React, Node.js, NextAuth, MongoDB, and OpenAI/Whisper APIs, to design and implement an interactive memory database catering to families affected by Alzheimer's.

TECHNICAL SKILLS

- **Languages:** Python, Javascript, TypeScript, SQL, Java, C++, Swift
- **Technologies and Libraries:** AWS, Next.js, React, Firebase, TailwindCSS, MongoDB, PostgreSQL
- **Libraries:** PyTorch, Pandas, MATLAB, TensorFlow