

Shanta Joshi

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EDUCATION

University of California, Berkeley

B.S. in Bioengineering | Minor in Electrical Engineering and Computer Science

Berkeley, CA

Aug 2022 - May 2026

Relevant Coursework: **Computing/AI:** Introduction to Artificial Intelligence, The Structure and Interpretation of Computer Programs, Data Structures, Designing Information Devices and Systems, Introduction to the Internet: Architecture and Protocols; **Biological Systems:** Engineering Molecules 1, Organic Chemistry, Cell Engineering, Biomedical Physiology for Engineers, Biological Transport Phenomena; **MedTech & Hardware:** Instrumentation in Biology and Medicine, Engineering Devices I, BioMEMS and Medical Devices

WORK EXPERIENCE

Clearwater Analytics

Software Development Intern

Boise, ID

June 2025 - August 2025

- Developed an automated Software Verification & Validation (V&V) testing framework using Playwright (Java) for a financial reporting system, reducing manual testing time by over 95% (from hours to minutes)
- Designed a dual-path End-to-End (E2E) automation framework (UI & API) to validate critical financial systems and complex datasets, utilizing a modular design to ensure high reliability and test coverage
- Architected a modular Java/Maven testing framework with a data-driven configuration layer, enabling seamless scaling of automated suites across complex, multi-variant reporting workflows
- Implemented automated report generation, validation, and comparison against reference datasets, significantly reducing manual QA overhead while improving accuracy and consistency

Amgen Biotech Experience (Lawrence Hall of Science)

Biotechnology Intern | Lab Assistant

Berkeley, CA

January 2024 - Present

- Support the preparation and delivery of molecular biology professional development workshops for high school educators
- Mastered and taught core biotechnology techniques: plasmid ligation, bacterial transformation, protein purification, and PCR
- Streamline lab logistics and inventory management for a program reaching thousands of students across the Bay Area

University of California, Berkeley Extension

Reader

Berkeley, CA

August 2023 - December 2023

- Evaluated coursework and exams for 50+ students in Differential and Integral Calculus, ensuring highest academic standards
- Mentored students during office hours, breaking down complex mathematical concepts to improve overall comprehension

Quantum Generative Materials

Software & Research Intern

Remote

August 2023 - September 2023

- Developed a Python-based preprocessing pipeline for medical imaging (DICOM) data, standardizing inputs for an AI/ML materials discovery pipeline
- Conducted comprehensive literature reviews on material informatics to inform R&D objectives and optimize AI/ML material composition algorithms

SELECTED PROJECTS

2D-World Generation Engine (Java)

- Engineered a randomized 2D world-generation system using pseudo-random seeds to ensure unique, reproducible game instances and define a customized experience for each player
- Implemented persistent state management (Save/Load) and a dynamic Heads-Up Display (HUD), optimizing real-time rendering, user interaction, and providing real-time updates on player stats and game state

LilyPad Mechatronic Arcade System (Arduino)

- Designed and prototyped a physical arcade interface integrating hardware-software communication for real-time physics-based gameplay
- Integrated reed sensors and servo-motors via Arduino to map physical inputs to game logic
- Built a project website to explain the different aspects of the project: <https://lilypadplunge.netlify.app/home>

TECHNICAL SKILLS

Languages: Java, Python, JavaScript, SQL, Scheme

Developer Tools: Playwright, Maven, Git, AutoCAD

Bio/Hard-Tech: BioMEMS, Microfabrication, GLP Lab Techniques, Instrumentation

LEADERSHIP & AFFILIATIONS

Theta Tau Professional Engineering Fraternity: New Member Education Chair, Academic Chair

Sigma Kappa Sorority: Director of Social Events

Biomedical Engineering Society: Member