

Raj Reddy

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Education

University of Utah

B.S. Computer Science

Salt Lake City, UT

August 2020 – May 2025

Relevant Coursework: Computer Systems, Machine Learning, Computer Graphics, Algorithms, Software Practice I & II, Database Systems, Computer Networks, Foundations of Data Analysis, Linear Algebra, and Calculus I/II/III.

Skills

Languages: Python, Java, C/C++/C#, JavaScript, Swift, SQL

Software: .NET, AWS, React, Node.js, Docker, Git, Azure, Linux, LINQ, MySQL, REST, Django, MongoDB, Agile

Experience

Doxy.me

Machine Learning Engineer

Charleston, SC

August 2024 – Present

- Worked with a research team of five to develop deep learning models for real-time behavioral analysis.
- Built transformer-based models with PyTorch and Llama, integrating WebRTC for real-time video streaming.
- Deployed inference pipelines on SageMaker & Fargate, improving diagnostic accuracy with reinforcement learning.

University of Utah

Undergraduate Research Assistant - FuTURES Lab

Salt Lake City, UT

May 2024 – Present

- Analyzed and optimized large-scale datasets, enhancing software configuration testing with tools like gcov and CMake, increasing code coverage by 30% on real-world APIs such as Libpng and PyTorch.
- Expanded Google OSS-Fuzz testing coverage, using compile-time options to improve the robustness of systems that manage diverse real-world datasets.

Software Development Intern - Identity and Access Management Team

Aug 2023 – May 2024

- Implemented critical two-factor authentication across the university, safeguarding infrastructure using Python-driven solutions.
- Automated security assessments and risk analysis across more than 50 systems, improving threat detection and providing scalable solutions.
- Managed and resolved Jira tickets related to authentication and security features, ensuring timely bug fixes and feature enhancements.

HEXstream

Software Engineering Intern

Chicago, IL

May 2022 – Aug 2022

- Centralized data from 25+ tools into Microsoft Azure, leveraging Azure SQL Database for structured data management and Azure Blob Storage for scalable, unstructured data storage.
 - Utilized Azure Data Lake and Azure Synapse Analytics to manage large volumes of data, enabling efficient querying across distributed systems.
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Projects

Telehealth Assessment Platform: Engineered a real-time telehealth tool leveraging PyTorch and Llama on large data volumes for emotional recognition, tone analysis, and facial recognition. Delivering certainty-scored scores to health-care providers to supplement patient evaluations with real-time behavioral data indicating mental health conditions.

Configuration Fuzzer: Developed a configuration fuzzing tool for OSS-Fuzz, automating build generation to identify critical compile-time configurations and improve code coverage. Extended support to multiple libraries like libpng and SQLite, enhancing scalability and efficiency.

Ray Tracing Engine: Created an interactive WebGL-based ray tracing engine in JavaScript, featuring realistic reflections, dynamic lighting, and customizable environment maps. Implemented shaders and user controls for rendering techniques, scene adjustments, and interactivity.