

Sathya Tadinada

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EDUCATION

University of Utah

Master of Science in Computer Science

Aug. 2026 - May 2027

Salt Lake City, UT

University of Utah

Honors Bachelor of Science in Computer Science, Bachelor of Science in Applied Mathematics

Aug. 2022 - May 2026

Salt Lake City, UT

- **Minor:** Psychology
- **GPA:** 3.950, Dean's List
- **Courses:** Discrete Mathematics, Linear Algebra, Computer Systems, Advanced Algorithms, Models of Computation

EXPERIENCE

Lead Teaching Assistant

Aug. 2024 - Present

University of Utah / Kahlert School of Computing

Salt Lake City, UT

- Grade exams and assignments for CS 3100 (Models of Computation), providing detailed feedback on automata theory, Turing machines, and formal languages to reinforce rigorous proof techniques.
- Develop practice materials and exam preparation resources on various topics (e.g., pumping lemma, DFA/NFA design, reductions).
- Lead weekly review sessions for 100+ students, clarifying complex theoretical concepts and formal proof strategies.

Software Engineering Intern

May 2025 - Aug. 2025

Select Portfolio Servicing, Inc.

West Valley City, UT

- Rebuilt the Advance Continuation Model (ACM) pipeline by porting 10 SAS regression models into Python and SQL, reducing runtime from 5 days to 30 seconds (99.99% improvement) while preserving statistical fidelity.
- Replicated a full backwards elimination regression workflow and validated coefficient equivalence across platforms.
- Improved reliability of an LLM-powered call summarization system by implementing retry logic, structured error logging, and pipeline validation - reducing failed summaries by 80%.

Undergraduate Researcher

Feb. 2023 - Aug. 2023

University of Utah / Human-Centered Computing Research Lab

Salt Lake City, UT

- Improved software quality by resolving code inconsistencies and standardizing coding conventions across research prototypes.
- Collaborated with researchers to synthesize qualitative data into 8 actionable recommendations for instructional enhancements, improving coding style test metrics by 10%.

PROJECTS

FreezeTag: Self-Hosted Image Tagging Platform

Aug. 2025 - Present

Go, Next.js, TypeScript, Python, REST APIs

Salt Lake City, UT

- Designed and implemented a full-stack image management platform with a Go (Gin) backend and Next.js frontend.
- Built RESTful APIs for image metadata extraction, tagging, and search with typed Result/Option abstractions.
- Implemented a modular architecture for automated tagging (Python-based vision model integration) and third-party plugins.
- Developed tag-based search and filtering UI with caching to reduce redundant API calls and improve perceived load time.

Deferred Rendering Engine

Mar. 2025 - Apr. 2025

C++, OpenGL, FreeGLUT

Salt Lake City, UT

- Built a deferred rendering pipeline with geometry and lighting passes, multiple render targets, and physically based shading.
- Implemented light volume rendering supporting 128 dynamic lights and optimized fragment shading for high-density scenes.

Custom Memory Allocator

Oct. 2024 - Nov. 2024

C, Makefile

Salt Lake City, UT

- Implemented a malloc-style memory allocator with free lists, block splitting/coalescing, and alignment guarantees, validating behavior under fragmentation stress tests.

ACTIVITIES

Co-Founder, President

May 2023 - Present

Software Development Club

Salt Lake City, UT

- Coordinated a month-long online hackathon and portfolio website competition achieving 90%+ member participation.
- Increased active member participation by 60% through strategic partnerships and high-impact events.
- Organized workshops, guest speaker events, and educational activities, contributing to the skill development of club members in the field of software development.

SKILLS

Languages: Java, Python, Rust, C#, C++, C, Swift, JavaScript, SQL, TypeScript

Frameworks: Next.js, React, Docker, OpenGL, GLUT, Spring Boot, Java Swing, .NET MAUI

Tools: Git/GitHub, TFS, TCP/HTTP/HTTPS sockets, JetBrains IDEs, VS Code, Visual Studio