Vatsal Goel

Salt Lake City • vatsal.goel@utah.edu • [LinkedIn](#) • [GitHub](#) • [Website](#)

EDUCATION

UNIVERSITY OF UTAH   May 2025
Master of Science in Computer Science

SRM INSTITUTE OF SCIENCE & TECHNOLOGY   May 2023
Bachelor of Science in Computer Science

TECHNICAL SKILLS

Languages: Python, TypeScript, Java, SQL, Go, Bash, YAML, C
Frameworks & Libraries: Flask, FastAPI, Node.js, Express.js, React, REST APIs, TensorFlow, Pydantic
Cloud & DevOps: AWS, Docker, ETL Workflows, Kubernetes, Terraform, CI/CD, Git, OpenAPI/Swagger

PROFESSIONAL EXPERIENCE

Founding Engineer   Jul 2025 - Present
i4 Ops   Salt Lake City, UT
- Building real-time infrastructure monitoring and secure data systems to prevent enterprise data exfiltration.
- Spearheading development of internal monitoring tools and system integration pipelines with a focus on observability, resilience, and secure-by-design architecture.
- Collaborating directly with the CEO and founding team to shape zero-exfiltration security architecture, product roadmap, and cloud deployment strategy.

Software Engineer   Oct 2023 – May 2025
University of Utah   Salt Lake City, UT
- Streamlined record ingest workflows through ticketing systems, reducing processing time by 30%.
- Engineered data verification workflows with Python, reducing manual effort by 70% and ensuring 99.9% data accuracy.
- Automated metadata validation and extraction processes using Python and Bash, enhancing digital preservation integrity across 1M+ records.

Software Engineer – Full Stack   Oct 2021 – Oct 2022
XGRO Technologies   Pune, India
- Developed full-stack e-commerce platforms using React, SQL, and REST APIs, improving system scalability.
- Optimized backend queries, caching, and API response times, reducing page load times by 30% & bounce rates by 12%.
- Designed and implemented responsive UI/UX with Figma, CSS and Adobe Creative Cloud resulting in a 25% increase in user engagement.

PROJECTS

[AWS Powertools for AWS Lambda (TypeScript)](#) | TypeScript, Node.js   Jan 2025 - Present
- Implemented JSON Schema validation utilities, including a @validator decorator and a Middy.js middleware for request/response validation.
- Collaborated with AWS maintainers to align with architectural patterns across multiple releases; recognized as a major contributor in 3+ public release notes.

[AWS Powertools for AWS Lambda (Python)](#) | Python, Pydantic   Feb 2025 - Present
- Delivered 4+ production-ready schema utilities, including AppSync/WebSocket event parsing and recursive DataMasking for complex Pydantic objects.
- Achieved 100% test coverage across 40+ unit tests and improved documentation clarity.

[DNS Server](#) | Python, Socket Programming   Nov 2024
- Built a recursive DNS resolver, supporting AAAA & CNAME queries with 98% resolution accuracy across test domains.
- Improved response time by 35% using an in-memory LRU cache and optimized query delegation across DNS hierarchy.

[Raft-Based Fault-Tolerant Key-Value Store](#) | Go, Raft, Distributed Systems   Sep 2024
- Architected a robust key-value storage system in Go using Raft consensus, distributed systems and concurrency.
- Delivered fault-tolerant capabilities through leader election, log replication, and state machine execution, ensuring consistency and resolving 95% of network partition issues within minutes.