

# SAI VARDHAN REDDY AINAVOLU

+1(602) 754-1231 ♦ Tempe, AZ ♦ [sainavol@asu.edu](mailto:sainavol@asu.edu) ♦ [LinkedIn](#)

## EDUCATION

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### M.S. Software Engineering

Arizona State University

December 2023

GPA: 3.77/4.0

### B.E. Computer Science

Birla Institute of Technology and Sciences - Pilani

2017 - 2021

GPA: 7.64/10

## EXPERIENCE

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### Elevate Software, Arizona: Software Developer

Jan 2024 - Mar 2024

- Developed an NFT minting service for a carbon capture company to mint NFTs embedded with carbon credits metadata.
- Designed and implemented a backend service using Bun, Elysia, and TypeScript, for a flood insurance brokerage firm.
- Integrated the backend service with a WordPress form and a custom CRM, and facilitated its deployment on AWS.

### Velocified, Canada: Software Engineer

Aug 2023 - Dec 2023

- Designed the software architecture for a client's course management system to serve up to 1000 concurrent users, using AWS ECS, EC2-ASG, ECR, ALB, and Route-53.
- Developed a robust web application utilizing Next.js for the frontend, Express.js and Node.js for the backend, passport.js for session management, and MongoDB as the database.
- Built an OTP service using AWS Lambda to verify user registrations for the system.
- Created a new CI/CD pipeline using AWS CodePipeline, CodeDeploy, and CodeBuild to deploy the application on AWS.

### Nutanix, San Jose, CA: Software Engineering Intern

May 2023 - Aug 2023

- Designed a reporting dashboard for providing real-time visibility on feature usage across all internal teams.
- Developed the dashboard using React, Node.js, Sails.js, and MongoDB, integrating D3.js and Recharts for advanced data visualization and analysis.
- Won a hackathon event for developing and integrating an AI-based smart suggest system.

### Publicis Sapeint, India: Software Engineer

June 2021 - June 2022

- Developed an ETL workflow using Pyspark in Databricks to send promotional emails for users from the Salesforce Marketing Campaign and Adobe Marketing Campaign.
- Worked on Infrastructure as code to deploy Customer Data Platforms on Azure.
- Optimized the deployment by switching to Terraform from custom bash scripts, which reduced the deployment time by 40
- Engineered stock order processing service using Node.js and Express.js, which processed stock orders from the AWS SQS queue.
- Deployed the application on AWS using Docker, ECS, ECR, and Fargate.
- Stress-tested the application to serve up to a million requests in one hour.
- Contributed greatly to an internal tool used to generate XML files for ETL workflows from a user-friendly GUI.

### BlueJeans by Verizon, India: Software Development Intern

Jan 2021 - June 2021

- Achieved 20-40% speedup for certain queries by normalizing the SQL tables.
- Engineered real-time data logging system for a new feature using Kafka, Java Spring and PostgreSQL.
- Discovered and fixed an error in distance measuring function of the analytics dashboard by implementing Haversine algorithm.

## PROJECTS

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### Intelligent Job scraper

- Scraped jobs using LinkedIn API by leveraging the requests library in Python.
- Inferred required experience and skills from job posters using a flan-t5-large model from the Hugging Face library.
- Reduced the irrelevant jobs by 95% after applying custom filters based on experience and skills companies.

## Improving logical reasoning in language models

- Designed a generator-verifier architecture for enhancing logical coherency.
- Leveraged Hugging Face libraries to train T5 model on logical reasoning identification via masked statement prediction.
- Realized a 3-4% accuracy increase compared to the baseline T5 model using the implemented approach.

## Minecraft server on AWS, Personal Project

- Architected an autonomously deployable Minecraft server in an AWS EC2.
- Automated server deployment by writing a cron job to deploy during server startup.
- Engineered a remote start solution for the server by exposing an API using AWS API gateway which triggered a lambda function to start the server by leveraging auto deploy from earlier.

## Vaccine tracker

- Monitored multiple telegram groups using Telethon API.
- Identified the vaccine slots and notified targeted users by processing the messages using NLP techniques like lemmatization and stop word removal.
- Provided continuous availability of the service by deploying on Oracle cloud.

## SKILLS

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<b>Technologies</b>	Kubernetes, Docker, PySpark, Databricks, Terraform, Git, Redis, Kafka, GraphQL, Airflow, Spark, AWS Lambda, AWS EC2, AWS ECR, AWS Fargate, PostgreSQL, MongoDB, Linux, Selenium, Cypress
<b>Languages &amp; Frameworks</b>	Java, JavaScript, R, Python, C/C++, Bash, HTML, CSS, React.JS, Node.JS, Express.JS, Next.JS, Spring MVC, SpringBoot
<b>Certifications</b>	Azure Data Fundamentals, AWS Technical Professional, and R Programming