

## Contact

1831 E. Apache Blvd. Apt. D-3150,  
85281, Tempe, Arizona  
+1 5138282815 (Mobile)  
sdeeduva@asu.edu

[www.linkedin.com/in/sai-deeduvanu](https://www.linkedin.com/in/sai-deeduvanu) (LinkedIn)

## Top Skills

Unity  
RunDeck  
SQL

## Certifications

AWS Certified Cloud Practitioner  
2020  
2020 Complete Python Bootcamp  
From Zero to Hero in Python  
Beginning C++ Programming - From  
Beginner to Beyond  
Dean's List

## Honors-Awards

Dean's List  
Dean's List  
Dean's List  
Dean's List

# Sai Deeduvanu

Software Engineer at Allstate | MS CS @ ASU | AWS Certified Cloud  
Practitioner | HashiCorp Certified: Terraform Associate  
Tempe, Arizona, United States

## Summary

I am a Graduate Student in CS at ASU with an emphasis on Cloud Computing and Artificial Intelligence. I have a passion for Math and Programming mainly because I love the innumerable ways these languages help us implement logic. Lately, I've had a growing interest in Cloud Computing and architecture. This has driven me to get certified by AWS & HashiCorp, and I am looking for opportunities to apply these skills and figure out if Cloud Engineering is the right fit for me.

## Experience

Allstate  
Software Engineer  
December 2024 - Present (6 months)  
Tempe, Arizona, United States

/ -:

- Improved API query accuracy by 60% by engineering FastAPI filters to support exact and inclusive date range logic, reducing irrelevant incident insights in LLM and non-LLM searches.
- Enabled real-time temporal filtering of vector search results by integrating user-defined startDate and endDate parameters, enhancing user control and incident discovery accuracy.
- Accelerated analyst workflows by 35% by supporting natural exploration of time-bound incident patterns, using date range filters alongside semantic search.
- Boosted backend test coverage to 100% on date logic branches with added unit and integration tests for inclusive filtering, exact matches, and edge case inputs (e.g., same start/end date).

- :

- Successfully led the design, development, and deployment of a cross-platform AI feature to help ECC analysts identify root causes and solutions faster from historical incident data
- Built a GPT-4o-powered summarization layer that distills hundreds of incident insights into 5–6 sentence high-level summaries, enabling faster triage and response decisions.
- Reduced insight review time by ~40% by parallelizing vector search and summary generation pipelines, ensuring the insights table rendered immediately without waiting on LLM output.
- Optimized API performance by eliminating redundant vector DB queries, reducing summary endpoint latency by ~30% through smart reuse of initial search results.
- Achieved 100% test coverage across LLM (FastAPI), API (Spring Boot), and UI (React), with 40+ unit/integration tests and SonarQube validation for release confidence.

: GPT-4o (Azure OpenAI), LangChain, ChromaDB, FastAPI, Spring Boot, React, Jenkins, SonarQube

## Arizona State University

### ASN Peer Lead

September 2024 - December 2024 (4 months)

Phoenix, Arizona, United States

Responsible for supervising 7 of our Subject Area tutors and leading the day-to-day operations at the Business Administration Tutoring Center at ASU

## Allstate

### Software Engineering Intern (Automation & Observability)

May 2024 - September 2024 (5 months)

Phoenix, Arizona, United States

- Implemented changes that resulted in a 21% reduction in Gradle vulnerabilities across the VE codebase.
- Migrated Tibco EMS queues to Active-Active configuration, doubling availability post-PaaS 2.0 migration.

- Developed comprehensive user guides, optimized prompts, parameterized environment config, added robust testing, and post-validation to improve solution accuracy by 38% for their GenAI product.
- Led a team of 5 to develop an AI-driven HR support tool (HR Prompt) using GPT-4 and NLP, securing first place in a product pitch competition among 100+ interns.
- Led database migration and redesigned UI to improve the visibility of AZ information for Unity events and notifications

## Academic Support Network

### Subject Area Tutor

August 2021 - May 2024 (2 years 10 months)

Tempe, Arizona, United States

- Delivered personalized academic guidance to students, focusing on critical Calculus and fundamental Math courses essential for the Engineering curriculum.
- Customized teaching approach by utilizing a blend of direct and indirect teaching methodologies tailored to each student's unique learning pace, fostering optimal comprehension and skill development.
- Supported management in hiring prospective tutors and organized YouTube Team's content

## Allstate

### Cloud Engineering Intern, Allstate Enterprise Solutions

May 2023 - August 2023 (4 months)

#### AWS Security and Access Management Enhancement:

- Implemented new FMS WAFv2 policy for Splunk, employing distinct rule groups for Splunk's public IPs based on environmental categorization.
- Created a specialized rule group within a web ACL to allow select IP addresses access to Splunk's external load balancer, potentially for testing.

#### Global Infrastructure and Access Control Collaboration:

- Collaborated with the infrastructure team to establish global hosted zones for pre-production and production accounts, enhancing DNS infrastructure and resilience.

#### Cross-Account IAM Support and Automation:

- Provided vital assistance to engineers in troubleshooting Lambda function configurations, enabling seamless IAM role assumption in different AWS accounts.
- Automated addition of new accounts to a global web ACL by updating AWS Firewall Manager policy modules.

## Allstate

### Cloud Engineering Intern, ATSV

May 2022 - August 2022 (4 months)

Tempe, Arizona, United States

- Developed a fault-tolerant Cloud solution to significantly reduce costs by migrating workloads in the non-production environment by leveraging AWS EC2 Spot Fleet, Auto Scaling Groups, Launch Configurations, and Cloud Watch Alarms
- Collaborated with colleagues and engineers to codify and deploy the infrastructure using Terraform Enterprise
- Identified and pitched a solution to how an existing AI-driven, H.R assistance chatbot software can be implemented within Allstate to simplify and accelerate the current hiring process

## Arizona State University

1 year

### Undergraduate Teaching Assistant (CSE/EEE - 120)

August 2021 - December 2021 (5 months)

Tempe, Arizona, United States

- Supported students in a core Digital Circuit Design course through concept review sessions and hands-on lab support, utilizing Digital and Verilog tools to enhance learning and comprehension.
- Support in debugging Command Prompt and analyzing GTK Waves to fix issues in student's Circuit Design.

## Fulton Ambassador

January 2021 - December 2021 (1 year)

Tempe, Arizona, United States

- As a Fulton Ambassador it is my role to share my experience and knowledge gained throughout my degree to help better prepare prospective freshman for college.
- Collaborated with SPARKS members to submit a recording to the Virtual Science Olympiad National Tournament including general conversations

based on popular questions high school students might have about university life

Ira A. Fulton Schools of Engineering at Arizona State University  
E-Learning Lab (EPICS)

August 2021 - December 2021 (5 months)

Tempe, Arizona, United States

- Developing an e-commerce website using Python and the Django framework.
- Debugging existing issues on our website.

Ira A. Fulton Schools of Engineering at Arizona State University  
Clarkdale Internet Infrastructure (EPICS) - Technical Advisor

January 2021 - May 2021 (5 months)

Tempe, Arizona, United States

- Worked with the Town of Clarkdale in proposing a solution for improving their existing internet broadband network.
- Worked as a Technical Advisor and conducted key research behind the various available broadband services in the area while analyzing their effectiveness and feasibility.
- Conducted broadband connectivity tests to analyze the strength, latency, and coverage of the existing network to verify whether the existing bandwidth is sufficient to support everyday use of the internet.
- Successfully delivered our proposal to stakeholder's requirements

---

## Education

Arizona State University

Master of Science - MS, Computer Science · (December 2023 - December 2024)

Arizona State University

Bachelor of Science - BS, Computer Science · (August 2020 - December 2023)

FIITJEE

High School Diploma, Physical Sciences, Mathematics · (2018 - 2020)

Lalaji Memorial Omega International School

High School Diploma · (2014 - 2018)

