Sai sadhan Saravanan

Tempe, Arizona | 6025522987 | sais.sarav98@gmail.com | LinkedIn | GitHub

SUMMARY

Software Engineer with 4 years of experience and a Master's in Information Systems, skilled in developing and deploying scalable solutions in large-scale environments. Proven track record of delivering high-quality systems under tight deadlines; seeking Software Engineer roles to contribute to impactful, challenging projects.

PROFESSIONAL EXPERIENCE

Software Engineer — Sep 2024 - Sep 2025
Arizona State University

Tech stack: **Python, NLTK, LLM, LangChain, SQL, AWS S3, Redshift**

- Built an end-to-end data pipeline using **Python,** and **REST APIs** to extract and orchestrate 100K+ unstructured text records from various sources, efficiently storing and managing data in Amazon S3
- Developed **Python** scripts implementing **NLP** techniques (stop word removal, lemmatization, stemming, tokenization) using **NLTK**, **TextBlob**, **scikit-learn**, and **TensorFlow** to clean and preprocess large-scale datasets, improving data quality by 30% and reducing preprocessing time by 50%
- Orchestrated an end-to-end ML pipeline, fine-tuning a **BERT model** from Hugging Face on **AWS SageMaker** and integrating **LLaMA LLM** via **LangChain**, improving NLP analysis accuracy by 31%
- Designed and developed a scalable **ETL** backend system using **AWS Glue** (Python Shell) and **Step Functions** to orchestrate data workflows from **S3** to **Redshift**, improving data reliability by 30% and reducing processing latency by 25%

Software Engineer — Mar 2021 - Jul 2023
Cognizant

Tech Stack: **Python, C#, SQL, .NET, AngularJS, SSIS, AWS, Linux, Terraform, Docker, Kubernetes, Agile, Scrum**

- Engineered a multi-region distributed web application for equity-backed transactions, leveraging microservices **(Docker/Kubernetes)**, **load balancing, autoscaling**, and **CI/CD** to deliver 99.9% uptime
- Designed and implemented an event notification system with **REST APIs, RDBMS,** and **AngularJS/TypeScript** frontend, streamlining workflows, improving system reliability, and **boosting user productivity by 30%**
- Managed a **Kubernetes-based CI system** using Python and Redis Streams, scaling to **12K+ daily jobs**, improving pipeline reliability, reducing testing time by 30%, and enhancing developer productivity
- **Migrated on-premise SAML authentication** to AWS-based SSO (Cognito/IAM Identity Center), centralizing login across enterprise applications, improving security, and user access efficiency
- Implemented automated environment provisioning using **Ansible** and **Terraform**, accelerating project handover and reducing setup time
- Proficiently supported releases and deployments by triaging, debugging, and resolving critical application issues, providing on-call support, delivering KT sessions, and maintaining feature documentation—reducing ticket backlog by 45% and improving system stability

Software Engineer Intern — Dec 2019 - Jan 2020
Cognizant

Tech Stack: **C#, SQL, Angular, MS SQL, SSRS**

- Developed an online shopping portal using **Web API, Angular, HTML,** and **CSS**, built on a microservices architecture with **Amazon DynamoDB** for scalable data management, supporting seamless operations and serving customers across South Asia
- Automated and scheduled data ingestion and report generation using **MS SQL Server** and **SSRS**, eliminating 3.5 hours of daily manual effort and improving team productivity by 40%
- Redesigned business event–mapping logic and implemented **directory-based partitioning in SQL**, boosting query efficiency, data reliability, and reducing event-processing time by 30%

Engineer Intern — Nov 2017 - Dec 2017
Nokia

Tech Stack: **Python, SQL, IoT, Raspberry Pi, Embedded C, Arduino**

- Collaborated with cross-functional teams to design and implement **embedded IoT systems**, including automated inventory bots, streamlining warehouse operations and improving operational efficiency
- Developed **Python and SQL automation scripts** to collect and analyze production machine metadata, optimizing resource allocation and boosting production efficiency by **13%**

TECHNICAL SKILLS

Programming & Web Development: Python, Java, C#, REST/Flask APIs, Bash (Linux), TypeScript, AngularJS, JavaScript, SQL, HTML

Database Technologies: RDBMS, MS SQL Server, NoSQL (DynamoDB), Redshift, BigQuery, SSIS, Apache Airflow, Apache Spark

Cloud and DevOps: AWS (S3, SageMaker, Route 53, Lambda, IAM, EC2, RDS), Docker, Kubernetes, Terraform, Vertex AI, Jenkins, Ansible

Tools & Collaboration: Git, Bitbucket, Jira, ServiceNow, Postman, Tableau, SSMS, Agile, Scrum, Unit Testing (Pytest)

AI/ Machine Learning: LLM, Generative AI, Transformers, Hugging Face, TensorFlow, LangChain, Supervised & Unsupervised Learning

EDUCATION

Master of Science, Information Systems Management GPA: 4.00 — Aug 2023 - Aug 2024
Arizona State University — Tempe, United States

Bachelor of Engineering, Electronics and Communication — Jul 2016 - Sep 2020
Anna University — Chennai, India