VENKATA SAI DHEERAJ NARAYANABHATLA

+1716-335-2428 | saidheerajnvs1998@gmail.com | LinkedIn | GitHub

EDUCATION

Master of Science in Computer Science   Jan 2022 - May 2023
State University of New York at Buffalo, Buffalo, NY, USA   4/4 GPA
Bachelor of Science in Computer Science and Engineering   Aug 2015 - May 2019
Chaitanya Bharathi Institute of Technology, Hyderabad, India   8.76/10 GPA

SKILLS

Languages: C, C++, Core Java, Python, SQL
Frameworks: FastAPI, Spring Cloud, Spring Boot, Spring Batch, Apache Camel, Flask, Mockito, Elastic search, Nginx
Software: Docker, Kubernetes, Maven, Git, Bitbucket, Eclipse, Tomcat, Apache SOLR, Terraform, Helm, RabbitMQ, ActiveMQ
Cloud: AWS Lambda, Step function, API Gateway, SQS, SNS, EC2, S3, DynamoDB, Amazon EKS, Amazon RDS, Cloudwatch, ECR

PROFESSIONAL EXPERIENCE

Bristol Myers Squibb
Role: Senior Software Engineer   Sept 2024 – Current
- Designed and implemented a RAG-based agentic AI solution for inventory search and management of Biological entities using Langgraph, Bedrock knowledge base with integration to internally built MCP tools for LIMS/ELN platform called Benchling.
- Implemented an integration system that interacts with legacy chemical registration platform using AWS Lambda and Step Functions to validate structures and generate harmonized tariff codes, accelerating delivery and shipment of chemical compounds
- Built a migration tool to export legacy experiments and their attachments from several source systems to a unified platform across Enterprise, thus helped in migrating more than 25k experiments with more than 100k files thus enabling AI-ready data
- Implemented a health monitoring and anomaly detector AI agent using Strands agent framework hosted on Bedrock agent runtime to track healthchecks and cloudwatch logs periodically and report any exceptions to the development team.

Role: Cloud Developer   Jul 2023 – Aug 2024
- Upgraded legacy systems from Java 8 to 17 and removed outdated libraries for sustainability of existing core systems.
- Re-architected an application to asynchronously process and calculate chemical structure properties for downstream data analysis.
- Setup CI/CD with Codebuild, Codepipeline and leveraged Cloudformation for automated deployments across environments.

NCR Corporation - Hyderabad, India
Role: Software Engineer – II, Authentic, Payment switch, Banking domain   Apr 2021 - Dec 2021
- Boosted the performance, scalability and availability of payment applications in the cloud by maintaining replica pods and introducing graceful shutdown thus bringing down the request-response latency to below 50 milliseconds from 100-300 milliseconds.
- Designed and implemented application properties and TLS certificates externalization to Spring cloud server and Hashicorp Vault that resulted in enhanced security & eased product upgrades in all 3 development, test and production environments.
- Stabilized web applications by fixing middleware communication issues between ActiveMQ and client applications that helped in the retrieval of data analytics from the database at 100% high availability.

Role: Software Engineer – I, Authentic, Payment switch, Banking domain   Jul 2019 - Mar 2021
- Integrated RabbitMQ for communication between independent microservices and enhanced the security by enabling TLSv1.2 and found the improved performance of 500 requests per second for 10 million requests in the performance test.
- Containerized applications using Docker, created Infrastructure using Terraform and scripted deployment files to deploy applications thus making a cloud-agnostic solution deployable in the top 3 cloud providers AWS, Azure and Google cloud.

Role: Software Engineer Intern   May 2019 – Jun 2019
- Worked on the project Natural Language Interface for Database, a spring boot NLP-based application that retrieves information from database by reading native English sentences as input from the user.
- The input sentences are pre-processed using client libraries such as Stanford Core NLP and Apache OpenNLP library.

ENGINEERING PROJECTS

OneDataShare (**Research project:** www.onedatashare.org)   Feb 2023 - May 2023
Tools:- Java, Spring batch, Apache HTTP client, Amazon EC2, RabbitMQ, Spring retry
- Integrated spring batch reader and writer framework for Google drive and WebDAV protocol that supports transfer of files up to size 10GB.
- Added support for retrying data chunk transfer upon failure using Spring retry framework for Google Drive thus helped in achieving 0% loss.
- Reduced file transfer time by half by introducing HTTP pipelining using Apache HTTP client for reading/writing bytes to the server.

Multi-topic Information retrieval chatbot   Nov 2022 - Dec 2022
Tools:- Python, Flask, Apache SOLR, Sentence-BERT model
- Created a chatbot that responds to user queries by fetching the top k ranked results against the semantic search on Apache SOLR.
- Indexed reddit submissions and comments from 4 different topics in Apache SOLR using dense vectors generated by Sentence-BERT model.

Full stack application on Maternal Health   Aug 2022 - Nov 2022
Tools:- Spring boot, websockets, Javascript, JQuery, Amazon EC2, Amazon S3
- Developed messaging system between patients and practitioners using websockets and a publisher-subscriber model on messaging broker that resulted in easy communication between patients and practitioners.

CERTIFICATIONS

- Issued AWS Certified Solutions Architect - Associate by Amazon Web Services training and certification.   June 2023 – June 2026

AWARDS & ACHIEVEMENTS

- Awarded **AppSec Guardians White Belt** in 2025 for demonstrated commitment to advancing secure development practices at BMS Research IT
- Awarded **Star of the Cadence** for Q-2 2020 at NCR Corporation for containerization and deployment of the application in Azure.
- Awarded **Distinguished Technical Achievement** for innovative idea and implementation on version upgrades of the application using auto-scaling with zero downtime on the cloud as part of SW R&D Excellence Awards 2020 at NCR Corporation.