

Venu Vardhan Reddy Tekula

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EDUCATION

New York University, Tandon School of Engineering

Aug 2022-May 2024

Master of Science in Computer Science

GPA: 3.9/4.0

Courses: Design & Analysis of Algorithms, Information Security & Privacy, Software Engineering, Big Data, Open Source & Professional Software Development, Cloud Computing, Introduction to Java, Software Supply Chain Security.

SKILLS

Programming Languages : Python, Java, Bash, C, C++, R

Full Stack Development : HTML/CSS, JavaScript, Django, Flask, FastAPI, React.js, Bootstrap, Node.js, JSON, REST, GraphQL

Databases : SQL, MySQL, PostgreSQL, NoSQL, MongoDB

Software & Platforms: Git, GitHub, Postman, AWS (RDS, S3, Lex, Lambda, EC2, EKS), Docker, Kubernetes, OpenSearch, Grafana.

EXPERIENCE

Software Engineer, FloodNet NYC, NYU CUSP

Jan 2023-Aug 2023

- Implemented continuous delivery pipelines, infrastructure-as-code (Terraform), and blue-green deployments that reduced deployment times by 62% and lowered change failure rate to under 2%.
- Containerized sensor data pipelines, back-end Directus, Node-RED services, and front-end Grafana visualizations into modular Docker images making the system resilient and portable across cloud providers.
- Automated cluster management and deployment by developing Helm charts that enabled spinning up 4 identical FloodNet environments to support increased data loads.

Software Developer, BeeHyv Software Solutions

Jan 2022-Aug 2022

- Led integration of Crater open-source invoicing solution into Bahmni hospital information system used by 200+ hospitals and clinics. Reduced payment processing time by 40% through automation.
- Architected cloud-native microservices infrastructure to offer Bahmni as SaaS. Utilized Docker, Kubernetes, Helm, Terraform, AWS, GitHub Actions, Jenkins for CI/CD. Onboarded over 50 new healthcare facilities after launch of new billing functionality.

Backend Developer, Bitergia

Oct 2020-Dec 2021

- Contributed to the development of Bitergia Analytics, a product instrumental in enhancing decision-making for over 50 teams at notable organizations such as Google, GitLab, and HashiCorp by providing critical insights into software project health, thereby accelerating decision-making processes by 20%.
- Spearheaded the automation of release process of the various components by release note generation and GitHub workflows for building & publishing the packages, achieving an 80% reduction in manual effort and a 50% increase in process speed and securing the supply chain for the project.

PROJECTS

BAM (Big Apple Move) | bamnyc.pythonanywhere.com

- Developed full-stack web application using Django and MySQL to provide users data-driven insights on 300+ NYC neighborhoods to inform living and travel decisions; reduced risks of misinformed choices by 30%.
- Built scalable and dynamic platform leveraging Django MVC architecture, geospatial APIs, and Bootstrap for responsive design; eased neighborhood search by 40% through interactive maps and filters.
- Deployed application on AWS Elastic Beanstalk to handle automatic scaling, load balancing, and incident response.

Dining Concierge Chatbot

- Designed and built a serverless web application for providing personalized dining suggestions through natural conversation with a chatbot. Developed the backend infrastructure on AWS including API Gateway, Lambda, OpenSearch, DynamoDB, SQS, SES.
- Constructed Lex chatbot carrying conversation to gather dining criteria and confirm contact info. Enabled queueing of requests and asynchronous restaurant queries to databases.
- Built out open search indexes and scraped thousands of restaurants data from Yelp API into NoSQL databases to power suggestions from chatbot conversations. Automated sending of dining recommendations emails compiled from databases.

PhotoCloud

- Created S3 hosted frontend enabling image uploads & search via text and voice with dynamic display of results. Built API Gateway and Lambda services for image uploads, S3 triggers, Rekognition analysis, and chatbot search integration with OpenSearch.
- Created Lambda functions to analyze images with Rekognition on S3 upload, index metadata in OpenSearch, integrate Lex chatbot search, and enable custom tagging for improved discovery.
- Automated builds and deployments of infrastructure and code using CodePipeline and CloudFormation.

CERTIFICATIONS AND ACHIEVEMENTS

- Selected as part of top 4% for 10-week cohort (Open Source Contributor Initiative 2023) to contribute to OpenSearch Project and receive mentorship from Amazon engineers.
- Earned skill badges on completion of AWS Knowledge Cloud Essentials and Serverless courses from AWS Training and Certification.
- Selected as a student developer for Google Summer of Code program in 2020, contributing to the CHAOSS Project.
- Rudra Memorial Merit Scholarship, academic fee waiver awarded based on RM-SAT for three consecutive academic years.