

Venu Vardhan Reddy Tekula

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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 using **Python** 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.

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.

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.