Venu Vardhan Reddy Tekula

New York, NY 11209 | (732) 986-8521 | vt2182@nyu.edu | vchrombie.github.io | github.com/vchrombie | linkedin.com/in/tvvr

EXPERIENCE

Software Engineer, NYU Tandon School of Engineering **Sep 2022 - May 2024**

- Contributed to the development of backend systems for the FloodNet project, building RESTful APIs using Python (Flask) to collect and analyze real-time data, using Kafka, from sensors across NYC for flood monitoring.
- Integrated AWS services such as EC2, Lambda, and S3 to deploy and scale data processing tasks, reducing system downtime by 20%.
- Deployed the application in a microservices architecture using Docker, Kubernetes and Terraform, achieving a 30% increase in deployment efficiency.
- Implemented full-stack features using React, HTML5, and CSS3 for frontend visualization of flood data, collaborating closely with data scientists and engineers.

Software Developer, BeeHyv Software Solutions **Jan 2022 - Jul 2022**

- Contributed to the development of Bahmni, an open-source hospital management system, by building highly scalable backend services using Java (Spring).
- Worked with MySQL and MongoDB to optimize relational and NoSQL databases, improving query performance by 25%.
- Integrated several AWS services, including RDS for managed databases and CloudFormation for infrastructure as code, reducing setup time by 50%.
- Implemented Docker-based containerization of services and utilized Kubernetes for orchestration in production environments, increasing system scalability by 25%.

Backend Developer, Bitergia **Oct 2020 - Dec 2021**

- Developed and maintained the backend systems for GrimoireLab and Bitergia Analytics using Python and Django, handling data collection from various repositories to create analytical dashboards.
- Implemented complex querying and indexing using OpenSearch/Elasticsearch and PySpark, improving data retrieval times by 35%.
- Assisted with DevOps processes using Jenkins and Terraform, automating infrastructure provisioning and code deployments.
- Automated CI/CD pipelines with GitHub Actions, resulting in a 50% reduction in release and deployment errors.

SKILLS

Programming Languages: Python, Go, Java, JavaScript, Bash, SQL, TypeScript
Backend Technologies: Django, Flask, Fast API, Node.js, Spring, gRPC, MVC, RESTful APIs, GraphQL, Redis, Nginx, Spark, Kafka
Databases: MySQL, MongoDB, PostgreSQL
Frontend Technologies: HTML5, CSS3, JavaScript, React, Vue, Vuetify
Cloud Services: Amazon Web Services (EC2, S3, Lambda, RDS, CloudFormation, API Gateway, SQS, etc.), Microsoft Azure, GCP
CI/CD & DevOps: Jenkins, GitHub Actions, GitLab CI, Docker, Kubernetes, Docker Compose, Terraform
System Design: Microservices Architecture, High Availability, Scalability, Fault Tolerance, API Design
Operating Systems: Linux, Windows, macOS

PROJECTS

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

- Developed a full-stack web application using Python (Django) and MySQL to provide users with data-driven insights on 300+ NYC neighborhoods, reducing risks of misinformed choices by 30%.
- Built a scalable and dynamic platform leveraging Django MVC architecture, geospatial APIs, and Bootstrap for responsive design; improved neighborhood search efficiency by 40% through interactive maps and filters.

Dining Concierge Chatbot

- Designed and built a serverless chatbot application for providing personalized dining suggestions through natural conversation.
- Developed the backend infrastructure on AWS, including API Gateway, Lambda, OpenSearch, DynamoDB, SQS, and SES. Built OpenSearch indexes and scraped thousands of restaurant data from the Yelp REST API into NoSQL databases.

PhotoCloud

- Created an S3-hosted frontend enabling image uploads and 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 and Lex. Developed Python Lambda functions to analyze images with Rekognition on S3 upload, and enable custom tagging for improved discovery.

EDUCATION

New York University, Tandon School of Engineering **Aug 2022 - May 2024**
Master of Science in Computer Science GPA: 3.9/4.0

ACHIEVEMENTS

- Selected as part of top 4% to contribute to **Amazon** OpenSearch Project and receive mentorship as a part of OSCI 2023.
- Selected as a student developer for **Google Summer of Code** program in 2020, contributing to the CHAOSS Project.
- Academic **Merit Scholarship** of $7000 per year as a recognition of my previous academic achievements from New York University.