

# Venkatesh Yerram

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## SUMMARY

Professional Security Software Engineer with 6+ years of experience in Web application development, API automation, Application security. Developed various AI Retrieval-Augmented Generation (RAG) models and Large Language Models (LLMs) for predictive analysis and forecasting. Architected automation solutions for insurance companies, developed selenium scripts for functional testing. Proficient Enabling CI/CD with Azure Pipelines, GitHub Actions and Package management using Azure Artifacts for Build/Release Management.

## WORK EXPERIENCE

### Python Developer

Jan 2024 – Aug 2024

#### Benchmark Gensuite

- Proficient in designing and implementing RESTful APIs with Fast API, Flask, Django, providing efficient communication between frontend and backend systems.
- Programmed in Fast API, leveraging async/await syntax to achieve non-blocking I/O operations and improve scalability by 40%.
- Created multiple RAG models (Retrieval Augmented Generation) using Python and NodeJS.
- Leveraged AWS Bedrock to enhance and optimize prompt engineering and testing processes, ensuring more accurate and effective natural language interactions.
- Skilled in integrating multithreading with I/O-bound and CPU-bound tasks, leveraging multithreading for asynchronous I/O operations and parallel computation, respectively.
- Designed and maintained databases using Python and developed Python-based API (RESTful Web Service) using Flask, SQL Alchemy, and PostgreSQL.
- Created Python/NodeJS script to create multiple indexes in Elastic search/ Open search and to retrieve data from the database.
- Worked on slack automation to create Jira tickets on a thread creation event in Python.
- Proficient in AWS services including EC2, S3, RDS, Lambda, and VPC, with hands-on experience in deploying and managing cloud infrastructure.

### Software Developer

Jul 2023 – Jan 2024

#### Codehub Tech Inc

- Streamlined development processes by advocating for code modularization, reducing debugging time by 25%.
- Mentored junior developers in Python, resulting in a 20% increase in code quality and efficiency.
- Implemented a CI/CD pipeline that reduced release cycles by 30%, resulting in faster feature delivery.
- Strong understanding of AWS networking concepts including VPC, Route 53, ELB, and security groups, with expertise in designing secure and compliant architectures.

### Software Developer Intern

Aug 2022 - May 2023

#### UNCC

- Developed 10+ Semgrep scripts while conducting research and designed 4+ assignments to perform code reviews.
- Actively contributed to the development of web applications using a combination of ASP.NET (C#) and Python.
- Implemented a caching mechanism, reducing database queries and increasing application speed by 25%.
- Reengineered a critical software module, increasing reliability and reducing crashes by 25%.

### Product Developer

Apr 2020 - Dec 2021

#### iAssist Innovations labs

- Developed 10+ Restful API to manage microservices, resulting in reduction of code redundancy by 50%.
- Proficient in designing, implementing, and managing relational database systems using RDBMS technologies such as SQL Server and MySQL.
- Provided leadership to multiple teams by offering guidance and support, which included conducting code reviews and assisting with debugging efforts.
- Conducted vulnerability assessment including vulnerability scanning (using SAST/DAST tools) and penetration tests on 10 applications following OWASP framework and provided remediation for over 50 vulnerabilities.
- Enhanced system security through effective IAM (Identity Access Management) and access control measures, resulting in a 50% reduction in trivial alerts.

- Designed & developed dynamically configurable application using JSON format configuration file and Python.
- Implemented a queuing mechanism using Kafka in multi-threaded environment, reducing the overall CPU usage by 50%.
- Secured the server architecture by introducing secure authentication capabilities (SSO, Token-Based, Two Factor, Multi Factor), access control technique, safely protected 10+ applications.
- Designed & developed an adaptable insurance claim automation for 20 hospitals, adopted by 500+ hospitals with 0% code change.
- Implemented secure DevOps pipelines, automated SAST solutions in GCP and Azure, reduced deployment time by 80%.

## Software Engineer

Nov 2017 - Mar 2020

*Manomay consultancy services*

- Developed backend (.NET & Python), front-end (Angular) and led the software development team resulting in project delivery within 50% of expected timeline, while exceptionally leaning towards Agile methodologies.
- Designed and Developed ETL pipeline in Python, launched application, configured, revamped the database, utilizing NoSQL database instead of SQL improving the query response time by 40%
- Designed 5+ application architectures and implemented security measures for the applications.
- Established an effective training process and served as a mentor to junior team members, imparting essential programming language fundamentals and secure coding practices prior to project assignments.
- Conducted comprehensive regression and functional testing of mobile applications utilizing Appium, ensuring robust performance and functionality.
- Effectively managed the security of cloud infrastructure by consistently implementing and maintaining firewalls and IAM rules for 5 applications in GCP and Azure.

## TECHNICAL SKILLS

**Programming Languages:** Python, C, C++, C#, Java/J2EE, JavaScript, SQL, Shell scripting, PowerShell, JavaScript Query, HTML, CSS.

**Frameworks:** ASP.NET MVC, Django, Flask, Spring Boot, Angular.

**Database systems:** MySQL, NoSQL, SQL server, Oracle, T-SQL

**Tools:** Git, Jenkins, Selenium, Visio (UML), Microsoft Office, Jira, Nginx, Docker, Postman, Apache Tomcat, PySpark, Appium

**Cloud & Operating Systems:** GCP, Azure, AWS Dynamo DB, AWS S3, Microsoft Windows, Linux, MacOS.

## ACHIEVEMENTS

**Recipient of the "Best Problem Solver, Achiever" Awards:** Acknowledged for exceptional problem-solving abilities and a consistent track record of achieving and exceeding project goals.

## EDUCATION

**Master of Science** in Cyber Security from University of North Carolina at Charlotte

Jan 2022 - May 2023

**Bachelor's in computer science** from Osmania University

Aug 2014 - May 2018