Eeshwar Vannemreddy

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Professional Summary

• Software Engineer and Data Engineer - 2 years of experience in developing scalable web applications, designing data pipelines, and performing penetration testing. Proficient in Python, SQL, and JavaScript to deliver efficient, data-driven solutions.
• Expertise in front-end frameworks like React.JS, Next.JS, and Tailwind CSS, alongside back-end technologies such as Python Flask and Spring Boot, to build dynamic, responsive web applications.
• Skilled in building and optimizing ETL pipelines, data APIs, and working with tools like Snowflake, GCP, and Databricks to support large-scale data processing and machine learning projects.
• Experienced in security testing with Burp Suite and custom Python scripts, identifying vulnerabilities and enhancing application security.
• Passionate about leveraging technologies such as AWS, Kubernetes, Kafka, and FastAPI to drive innovation and contribute to impactful software and data projects.

Technical Skills

Languages: Python, Java, SQL, HTML/CSS, JavaScript/TypeScript, PHP

Tools: NumPy, Pandas, Seaborn, MatPlotLib, Git/GitHub, Databricks, ETL Tools, PowerBI, Tableau, Unix Shell, VS Code, Apache NetBeans, IntelliJ IDEA/PyCharm, Figma, Jenkins, Wordpress, Atom, Burpsuit, Wireshark, Acunetix, Manual Penetration Testing, Firewalls, Adobe XD, Jira, Microsoft Office

Technologies/Frameworks: Next.js, React.js, Google Cloud Platform, Snowflake, Python Flask, Springboot, Bootstrap, Kubernetes, DevSecOps, Spark, Kafka, AWS, FastAPI

Operating Systems: Windows, MacOS, Linux (Kali, Ubuntu)

Experience

Penetration Tester | Syberbrigade Jul. 2021 - Jan. 2022

• Developed and executed comprehensive penetration testing plans using **Burp Suite** and **custom Python scripts** to identify and exploit vulnerabilities in web applications, with a **90%** improvement in application security by detecting flaws in real-time with actionable remediation strategies.
• Documented security procedures, created a detailed **remediation** approach leading to a **75%** reduction in recurring vulnerabilities through the implementation of best practices in **security protocols.**
• Designed and deployed advanced attack payloads **(SQL injection, XSS)** to uncover critical vulnerabilities, strengthening input validation and authorization. Collaborated with cross-functional teams to address security vulnerabilities, expedite patching, and enhance overall security resilience.

Web Developer | Skillbanc May 2020 - Sept. 2020

• Automated website object updates by creating **Python scripts and JavaScript**, which resulted in a **70%** reduction in manual update time, optimizing content management and enhancing operational efficiency.
• Resolved critical bugs and user-reported issues, enhancing application stability and user experience by utilizing **Git for version control** and **VS Code for debugging**, ensuring a seamless user interface.
• Optimized website code using **Python**, and **JavaScript** significantly improving load times and overall performance, while implementing best practices for code maintainability and efficiency.
• Conducted presentations on the automation code, enhancing team understanding and enabling smoother integration of automated processes into daily operations.

Projects

Uber Clone NextJS Application

• Developed a high-performance Uber clone web application using **Next.js, React.js, and Tailwind CSS,** incorporating dynamic and responsive UI components for seamless user experiences. **Integrated Google Maps API and React Autocomplete** for real-time location selection and navigation, ensuring accuracy and usability.

• Implemented secure and scalable backend integrations using **Google Cloud Platform (GCP)**, **Google Cloud Run**, **Clerk for authentication**, and **Stripe for payment processing**. Leveraged **Next.js API routes** to streamline data handling and ensure optimal performance.
• Implemented advanced developer tools and optimizations, including **Google Webmaster Tools** and **JSON-based configurations**, to improve app performance and accessibility. Utilized modern web development practices with **TypeScript** and **GCP**, ensuring maintainability and alignment with cutting-edge front-end software engineering standards.

Online Store Management System

• Developed a comprehensive online store management system utilizing **Python, Flask, and MySQL**. The system incorporates efficient database design and SQL queries to establish scalable data pipelines that facilitate **real-time data processing** and ensure seamless data transactions.
• Engineered a responsive and intuitive user interface utilizing **HTML5, CSS, and JavaScript**. Integrated APIs to ensure seamless data access and enhance user experiences. Developed data APIs with Flask to facilitate data extraction, analysis, and reporting, providing comprehensive business insights.
• Optimized system performance and data workflows by utilizing Flask for backend development and ensuring seamless communication between frontend and backend components. Implemented best practices in data engineering and frontend development, facilitating efficient data-driven decision-making and enhancing overall system scalability and security.

Predictions of a Classifier

• Designed and implemented LIME-based local explanation models in Python, **leveraging explainable AI (XAI) techniques** to provide interpretable machine learning predictions, achieving an impressive **85% accuracy** in model explanation for data-driven decision-making.
• Developed and integrated interactive **data visualizations** using **JavaScript**, creating dynamic user interfaces that enhance engagement, interpretation, and understanding of AI-driven outcomes.
• Enhanced model explainability and transparency, improving trust and usability of machine learning models for data-driven decision-making processes.

Walmart Data Analytics

• Engineered a Random Forest Regressor model to predict weekly sales across Walmart stores, achieving **96% accuracy** by preprocessing data with **Python and utilizing scikit-learn** for model development and **SQL** for efficient data management.
• Applied feature engineering to enhance model performance by incorporating key factors such as store type, fuel prices, unemployment rates, and departmental sales, improving predictive insights for inventory and pricing strategies.
• Developed interactive data visualizations using JavaScript, including bar charts, line plots, and correlation heatmaps, to visually explore customer behavior, sales trends, and key performance drivers, enabling data-driven decisions for marketing and resource optimization.

Automation Code - N3XTSLIDE Project

• Developed an automated Python script for the N3XTSLIDE project, streamlining the generation of **934 presentation slide objects** and **4 SVG templates**, significantly reducing manual effort in content creation.
• Integrated JavaScript to enhance the user interface and ensure seamless interaction between the generated slides and SVG code, enabling dynamic updates on the web platform with minimal user input.
• Leveraged **Javascript** and **Python** to implement an efficient backend workflow, improving SVG code updates with high accuracy and automating the presentation generation process, resulting in increased web development efficiency and reduced operational overhead.

Education

University of North Texas Aug. 2022 - May 2024
M.S. Computer Engineering

ICFAI University Jul. 2018 - May 2022
B.Tech Electronics and Communication Engineering

Coursework: Operating System Design, Software Engineering, Fundamentals of Database, Secure E-Commerce, Big Data+Data Science, Computer Algorithms, Secure Software Development, Software Development for AI