Sai Vishal Matcha

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PROFESSIONAL SUMMARY

- **3+ years o**f experience in **Python, Django,** and **Flask development.**
- Proficient in **SDLC** with expertise in designing, developing, and maintaining scalable web applications.
- Strong knowledge of **Python programming**, including OOP, functional programming, and scripting.
- Expertise in **Django** and **Flask** frameworks for building secure and high-performing web applications.
- Skilled in **database management** using SQL, PostgreSQL, MySQL, and NoSQL databases like MongoDB.
- Hands-on experience with **RESTful APIs**, third-party API integration, and WebSocket solutions.
- Proficient in **cloud platforms** like AWS (EC2, S3, Lambda) and Azure for deployment.
- Experience with **Docker, Kubernetes**, and CI/CD tools for efficient development pipelines.
- Skilled in Python libraries like Pandas, NumPy, and scikit-learn for data analysis and automation.
- A team player with strong communication skills, experienced in mentoring and knowledge sharing.

TECHNICAL SKILLS

Python Technologies	Django, Flask, FastAPI
Python Tools	PyCharm, Visual Studio Code, Anaconda, Pip, Virtualenv
Web Technologies	HTML5, CSS3, JavaScript, JSON, XML, AJAX, REST, SOAP
IDE	PyCharm, Visual Studio Code, Jupyter Notebook
Languages	Python, SQL, C++, JavaScript
Frameworks and Libraries	Django, Flask, Pandas, NumPy, Matplotlib, scikit-learn, TensorFlow, PyTorch
Database Technologies	PostgreSQL, MySQL, MongoDB, SQLite
Cloud Platforms	Microsoft Azure, AWS (EC2, S3, Lambda)
Version Control	Git, GitHub
Testing Frameworks	Pytest, Unittest
Build and Deployment	Jenkins, Azure Pipelines, Docker, Kubernetes
Operating Systems	Windows, Linux, macOS
Office Tools	MS Excel, MS Word, MS Outlook

PROFESSIONAL EXPERIENCE

University of California | Software Engineer (Student Assistant)

Riverside, United States ***January 2024 – December 2024***

- Developed the **CupCake Carbon Cycle Model**, a full-stack web application for visualizing carbon cycles using **React**, **Python**, and **PostgreSQL**. Enhanced research productivity by reducing data processing time by 30%.
- Spearheaded the development of a **Retrieval-Augmented Generation (RAG)-based Chatbot**, utilizing **Python**, **TensorFlow**, **Elasticsearch**, and **FastAPI**. Improved research efficiency by providing real-time, insightful responses and automating document retrieval.
- Contributed to full-stack development and optimized user engagement for tools addressing climate change research.

Environment: React, Python, Flask, PostgreSQL, TensorFlow, FastAPI, Elasticsearch, HTML5, CSS3, JavaScript, Git, Linux

Databricks | Associate Technical Solutions Engineer

Bangalore, India ***April 2023 – September 2023***

- Resolved complex issues on the **Spark** and **Databricks** platforms, ensuring SLA compliance while providing best practices for custom solutions and optimizations.
- Collaborated with cross-functional teams to address user needs and implement enhancements based on community feedback.
- Monitored community trends and user engagement metrics, driving strategic decisions for product improvements.
- Designed and optimized scalable data pipelines to manage large datasets efficiently, improving operational efficiency.

Environment: Spark, Databricks, Python, SQL, Data Pipelines, Big Data, Cloud Computing

Databricks | Software Engineer Intern
Bangalore, India ***June 2022 – April 2023***

- Developed a data-driven model to streamline ETL processes, ensuring accurate case categorization into platform-specific or Spark-specific domains.
- Contributed to troubleshooting and resolving issues within the Spark environment, improving platform reliability.
- Supported data modeling and data warehouse efforts, optimizing data organization and accessibility across platforms.
- Played a key role in enhancing Spark-based processes through strong problem-solving and debugging skills.

Environment: Databricks, Spark, Python, SQL, ETL Processes, Data Modeling, Cloud Platforms

R.I.N.L. | Project Trainee
Visakhapatnam, India ***September 2021 – June 2022***

- data from learning management systems, enabling efficient data storage and retrieval processes.
- Built a **full-stack web application** with a **React-based front end**, **Flask backend**, **PostgreSQL database**, and **Docker** for containerization to analyze and process **RINL transport data**, improving operational efficiency and data accessibility.
- Created interactive **data visualizations** for RINL transport data using **Plotly Dash**, enhancing the **frontend user interface** to support better decision-making and insights.
- Implemented dynamic **frontend components** with **HTML**, **CSS**, and **JavaScript** to deliver an intuitive and user-friendly interface for the web application.

Environment: FastAPI, Flask, React, PostgreSQL, Docker, Plotly Dash, REST APIs, HTML, CSS, JavaScript, Data Visualization

EDUCATION

University of California | Master of Science in Computer Science *2023 – 2024*
Riverside, United States

Amrita Vishwa Vidyapeetham | Bachelor of Technology in Computer Science *2019 – 2023*
Bangalore, India

PUBLICATIONS

Empowering Healthcare with Disease Prediction for Seamless Doctor Consultations Publication
Bangalore, India ***2021 – 2023***

- Designed and developed a **web application** that consolidates healthcare services, providing seamless access to features like patient health record storage, blood bank management, hospital details, doctor availability, bed availability, and medical insurance services under a unified platform.
- Implemented **machine learning (ML)** models for symptom prediction and diagnosis assistance, using **Natural Language Processing (NLP)** to extract symptoms from patients' text-based descriptions.
- Built an online doctor appointment system with real-time booking and integrated **Google Maps API** to locate nearby doctors, hospitals, and pharmacies.
- Ensured interoperability of health services by integrating **APIs** for secure sharing of patient health records and data between multiple healthcare providers.
- Created an intuitive and user-friendly **frontend interface** to improve patient interaction and streamlined backend workflows for managing healthcare services.

Environment: React.js, Flask, FastAPI, PostgreSQL, TensorFlow, Scikit-learn, NLTK, OpenAI APIs, Google Maps API, Docker, AWS, REST APIs