

Venkata Vikhyat Choppa

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Summary

Experienced Machine Learning Engineer with a strong background in developing and deploying AI/ML solutions. Proven track records enhancing user experiences, optimizing data pipelines, and implementing cutting-edge ML models. I am skilled in Python, PyTorch, and cloud technologies, with a focus on creating scalable and efficient solutions. Experienced in developing web applications using test- driven development (TDD) and JUnit as a testing framework.

SKILLS

- **Languages:** Python, R, C++, JavaScript, SQL, Java
- **Frameworks:** Scikit-learn, NLTK, TensorFlow, PyTorch, Django, HuggingFace, FastAPI,Qt, OpenGL, MQTT, UART
- **Tools:** Kubernetes, Docker, Git, PostgreSQL, MySQL, MongoDB, Airflow, Kafka, Spark, MLflow.
- **ML/AI Skills:** Feature Engineering,Deep Learning, Natural Language Processing,Neural Networks,LLM.
- **Platforms:** Linux, Web, Windows, Arduino, Raspberry Pi, NVIDIA Jetson, AWS, Azure
- **Soft Skills:** Problem Solving, Analytical thinking, Teamwork and collaboration, Communication skills
- **Other Skills:** Software design patterns,Data Structures and Algorithms,Object-Oriented Programming

EXPERIENCE

- **Data Inception** Chesterfield, MO
 - **Machine Learning Engineer — Product Owner | Aug 2024 - Present** Full time
 - Engineered a Gen AI chatbot system using Django to enhance application interactivity and user experience, resulting in a 2000% increase in the user base.
 - Built an AI agent system using Hugging Face to increase product customization, leading to a 30% increase in sales.
 - Programmed a LSTM model to analyze the files from users and scan their docs to improve recommendations using PyTorch and deployed using MLflow.
 - Developed a Fast API application from scratch and integrated it with SMTP, Prometheus, Grafana and built and deployed microservices using Fast API and implemented authentication with JWT in AWS S3.
 - Assembled and scheduled data pipelines using Airflow to automate data processing, gathering data, and uploading it to AWS S3.
- **Power of Patients** Boston, MA
 - **Machine Learning Engineer | Jan 2023 - Jun2023** Internship
 - Engineered scalable data warehouse for TBI patient data using AWS Redshift, improving query performance and accessibility by 30%.
 - Programmed a robust text classification system using PyTorch and NLTK, achieving 85% accuracy in detecting patient responses; streamlined communication between healthcare providers and patients by automating feedback analysis.
 - Designed and optimized data flow operations using UML diagrams, leading to implementation changes that improved processing efficiency by 25%.
 - Built ETL pipelines with AWS Data Pipeline and Apache Spark, reducing EMR data processing time by 40%.
 - Created conversational AI features using BERT and PyTorch models, increasing the customer base by 30,000.
- **Definitive Healthcare** Bangalore,KA
 - **Software Engineer — Machine Learning | Aug 2021 - July 2022** Full time
 - Architected RESTful APIs using FastAPI, optimizing performance by 50% and enhancing product functionality.
 - Designed modular backend components leveraging Python and Django to process massive datasets in real-time; resulted in streamlining workflows for analytics teams while handling over 1 million records daily without downtime.
 - Engineered a custom ETL tool that leverages S3 for data storage and SageMaker for data transformation, improving data processing efficiency by 35% in Linux development environment.
 - Streamlined CI/CD pipelines and containerized systems using Docker, reducing build time by 25% and increasing release frequency by 30%.Built an internal SQL editor capable of extracting and loading data from AWS Athena and Snowflake, adhering to FHIR standards.
 - Developed and deployed machine learning models using AWS Sagemaker for patient outcome prediction and risk stratification, improving accuracy by 25% and supporting data-driven decision-making using Agile methodology.
 - Conducted A/B tests on model variants, resulting in a 15% increase in model adoption by healthcare providers and supporting data-driven decision-making across the organization working with cross-functional teams.

PROJECTS

- **MRI Image Tumor detector:** Built CNN model to identify the tumor in MRI Images built using PyTorch and backend using Fast API and front end using the ReactJs and NextJs with increased accuracy of 92%. | [Github]
- **LSTM Application:** Built LSTM system algorithm from scratch using PyTorch,Streamlit,Plotly and performed time series stock forecasting analysis with trend and seasonality diagnosis and containerized the application using Docker. | [Github]
- **Data Visualization Dashboard:** Built data visualization dashboards and prediction systems for various types of data and deployed Docker containerized application. | [Github]

EDUCATION

- **Northeastern University** Boston, MA
 - Masters of Science - Applied Machine Intelligence
 - Courses: Analytics, Predictive Analytics, Data Mining, Artificial Intelligence, Applied AI, Statistical Analysis, AI System technologies, Risk Analytics*

CERTIFICATIONS

Responsible Conduct of Research for Engineers | Social and Behavioral Research Best Practices for Clinical Research | AWS Machine Learning - DeepRacer