Poovarasan Rajendiran

Email: poovarasan9797@gmail.com
Phone: +44 7774955403
LinkedIn: https://www.linkedin.com/in/poovarasan-rajendiran/
GitHub: http://www.github.com/poov9797

SUMMARY

Certified and accomplished data professional with a strong background in developing and deploying machine learning pipelines, optimizing data workflows, and delivering tailored data science solutions. Proven track record of leveraging advanced analytical skills and robust technical expertise in tools like TensorFlow, PyTorch, Docker, and Kubernetes to drive business insights and efficiency. Recognized for exceptional problem-solving abilities, effective communication, and leadership in both collaborative and independent work environments.

SKILLS

- **Programming Languages:** Python (TensorFlow, PyTorch, scikit-learn), R, SQL, Java (Selenium), C#.
- **Databases:** MySQL, Oracle, PostgreSQL, NoSQL (MongoDB and DynamoDB), ETL, ELT, DBT.
- **Cloud:** AWS (SageMaker, S3, EC2, Glue, Athena, Bedrock, ECR, EKS, CloudFormation, Elastic Beanstalk, Kinesis, Redshift), Google Cloud (GCS, Compute Engine, GKE, BigQuery, Vertex AI, Looker Studio), Azure (Azure DevOps, Azure Data Pipelines), Apache Kafka.
- **Containerization and Orchestration:** Docker, Docker Swarm, Kubernetes, Kubeflow, Apache Airflow.
- **Infrastructure as Code and CI/CD tools:** Terraform, Argo CD, AWS CodePipeline, GitLab, Bitbucket.
- **Machine Learning:** NLP, LLM (Large Language Models), Transformers, GPT, Hugging Face, Regression, Classification, Clustering, CNN, DNN, Principal Component Analysis, Feature Selection, Pandas, NumPy, Scikit-Learn, TensorFlow, Predictive Analysis, Text Analysis, Statistical Analysis.
- **Lifecycle models:** Agile and scrum methodologies, Waterfall, JIRA, HP ALM.
- **Soft Skills:** Leadership, Communication, Time-Management, Teamwork & Respect, Interpersonal skills, Work Ethic, Creativity, Problem Solving.

WORK EXPERIENCE

PANTECH.AI
Artificial Intelligence Intern (March 2024 – June 2024)

- Designed and developed robust and scalable machine learning pipelines to automate the end-to-end ML workflow, from data ingestion to model deployment.
- Integrated various tools and frameworks such as TensorFlow, PyTorch, and MLFlow to facilitate model training, evaluation, and deployment.
- Monitored the performance of deployed models and pipelines, using tools like Prometheus and Grafana to track metrics and identify issues.
- Optimized the pipelines for efficiency, reducing latency and improving throughput by fine-tuning model parameters and leveraging parallel processing.
- Deployed machine learning models into production environments, using containerization tools like Docker, AWS ECR and orchestration platforms like Kubernetes to ensure seamless integration.
- Created and maintained comprehensive documentation for ML pipelines, deployment processes, and performance metrics, providing clear guidelines and references for the team.

Infosys Ltd
Senior Systems Engineer (June 2020 - September 2021)

- Designed and implemented an advanced recommendation system that increased user engagement by 25% using collaborative filtering and deep learning models.
- Created a fraud detection model using ensemble learning techniques, reducing fraudulent transactions by 40% within 6 months.
- Developed a real-time analytics dashboard leveraging Apache Kafka and Spark, which streamlined data pipeline processes and improved data latency by 30%.
- Conducted A/B testing for hyperparameter optimization in machine learning models, resulting in a 15% increase in model accuracy.

- Integrated machine learning models into production, enabling scalable solutions that handled over 1 million requests per second with minimal latency.
- Managed data pipeline using PySpark and Python, refining data processing time by 18%.
- Developed and optimized probabilistic models, improving predictive accuracy by 15%.
- Used Elastic Map Reduce (EMR) to handle large datasets, reducing processing time by 25%.
- Analyzed and visualized complex datasets using SQL, R and Python, providing valuable business insights and aiding decision-making.
- Pre-processed and cleaned large datasets to ensure quality and consistency, using techniques such as data normalization, feature engineering, and data augmentation.
- Created visualizations and reports to communicate findings and insights to stakeholders, using tools such as Python's matplotlib, seaborn, and libraries like Pandas and NumPy.

Infosys Ltd
Systems Engineer (May 2019 - June 2020)

- Developed a distributed training framework that reduced model training time by 40%, using TensorFlow and Kubernetes.
- Played a crucial part in a team of 5 engineers to scale machine learning infrastructure, resulting in 35% improved efficiency in resource management.
- Implemented automated pipeline for model deployment, reducing manual intervention by 70% and minimizing deployment errors.
- Improved data preprocessing scripts using Apache Spark, increasing data pipeline throughput by 200%.
- Designed and implemented a monitoring system for ML models in production, increasing detection of model drift incidents by 50%.
- Optimized GPU utilization for AI workloads, leading to a 30% reduction in compute costs.
- Collaborated with data scientists and engineers to ensure seamless integration of ML models into production, boosting cross-team efficiency by 25%.
- Implemented hybrid cloud DevOps strategies for microservices in Java, NodeJS, ReactJS, and Python, focusing on optimizing Ubuntu Linux environments.

EDUCATION

University of Sussex
MSc in Data Science with Distinction (2022 – 2023)
Coursework: Algorithmic Data Science, Machine Learning, Applied Natural Language Processing, Data Analytics, Data Visualization, Advanced NLP, Image Processing, Data Science Research Methods, Mathematics and Computational Method.

RMK College of Engineering and Technology
Mechanical Engineering (2015 – 2019)
Coursework: Principle of Management, Computer Graphics, Data Structures and Algorithms, Professional Ethics, Process Planning and Cost Estimation, Computer Integrated Manufacturing Systems, Total Quality Management, Computer Aided Design, Engineering Economics and Project Maintenance.

PROJECTS

- Utilized Natural Language Processing for Stock Market Forecasting.
- Colour Pattern Recognition Software.
- Sentiment Analysis on IMDB Dataset.
- Activity Detection Modeling using the PAMAP2 dataset.
- Dry Beans Classification using Machine Learning models.

CERTIFICATIONS & ACHIEVEMENTS

- AWS Certified Data Engineer - Associate.
- Confluent Fundamentals Accreditation.
- Infosys Certified DevOps Professional.
- IBM Data Analysis with Python.
- Deeplearning.ai TensorFlow Developer.