IRFAN AHAMED MELEKKANDY PUTHALATH

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EDUCATION

RUTGERS UNIVERSITY *Sep 2024 – Dec 2025*

Master of Information Technology (Machine Learning)

Relevant coursework: Advanced Database Management (AWS, Snowflake), Data Structures And Algorithm, Machine Learning, Python for Analytics

RV COLLEGE OF ENGINEERING *Aug 2017 – Aug 2021*

Electronics And Instrumentation

EXPERIENCE

CGI Inc. *Sep 2022 – Jul 2024*

Software Engineer Bengaluru, India

- Architected and implemented an intelligent document processing system using NLP and computer vision techniques, automating extraction and classification of critical information from unstructured documents with 94% accuracy
- Developed custom BERT models on AWS SageMaker cutting down document processing time by 73% compared to manual methods, enabling clients to process over 15,000 documents daily
- Designed microservice architecture using Vert.x, integrated the ML pipeline with client systems, decreasing operational costs by $1.8M annually while enhancing compliance reporting accuracy by 37%
- Spearheaded the design, development, and deployment of a microservices project using Vert.x and Quarkus, overseeing progress from planning to deployment and managing system integration and optimization
- Enhanced the time efficiency of a fee-calculating system by 87%, improving overall performance through algorithmic optimizations and parallel processing techniques
- Mentored junior developers on machine learning and software engineering best practices, driving a 30% improvement in coding standards and efficiency within the team

RELEVANT PROJECTS

Multimodal Sentiment Analysis System *Jan 2025*

- Engineered a multimodal sentiment analysis system integrating BERT and CNN architectures, attaining 91% accuracy on standard datasets and reducing model retraining time by 15% through refined data preprocessing
- Deployed the solution as an API service using FastAPI and Docker with an automated retraining pipeline, showcasing end-to-end ML integration

React Notes Application Deployment with AWS Amplify *Nov 2024*

- Built and Deployed a scalable React-based Notes application using AWS Amplify, achieving 99.9% uptime and supporting over 5,000 active users
- Integrated GitHub with AWS Amplify to establish a CI/CD pipeline, reducing deployment time by 50% and ensuring seamless updates with each commit
- Enhanced user experience by configuring AWS Amplify's CDN edge locations, shrinking average image loading times from 3 seconds to under 750 milliseconds and minimizing bounce rates

Production-Grade Depth Regression Model *Oct 2024*

- Designed the architecture to build a production-grade neural network for monocular depth estimation, achieving a groundbreaking 98% precision rate in identifying objects from a single camera feed
- Optimized model architecture to reduce inference time by 67% while maintaining accuracy, enabling real-time processing at 28 frames per second on edge devices
- Implemented ensemble techniques, improving prediction robustness by 20% in challenging lighting conditions, critical for autonomous navigation applications
- Collaborated with a team to integrate global and local depth networks, boosting overall performance by 45%

SKILLS & CERTIFICATIONS

Certifications: AWS Certified Developer – Associate

Machine Learning Algorithms & Techniques: Supervised Learning, Deep Learning (CNNs, RNNs, Transformers), Unsupervised Learning (Clustering, PCA), Reinforcement Learning

ML Engineering & Deployment: MLOps (Kubeflow, MLflow), Model Serving (TensorFlow Serving, ONNX Runtime, TorchServe), Monitoring and Drift Detection

Programming Languages & Frameworks: Python, Java, SQL, C++, R, JavaScript, Angular, Vert.x, Bash, Linux

Tools & Platforms: Docker, Kubernetes, AWS SageMaker, MySQL, Redis, Tableau, VS Code, Eclipse, Git, Pandas, NumPy

Cloud & DevOps: AWS, Azure, CloudFormation, DynamoDB, ECS, CI/CD Pipelines, Containerization