




ADARSH RAMESH KUMAR

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Education

Master of Science in Computer Science (GPA: 3.9/4.0)

The University of Texas at Dallas (Jonsson School Dean's Graduate Scholarship Recipient)

Richardson, TX

Aug 2022 - May 2024

- **Relevant Courses:** Web Development, Database Design, Algorithm Design, Operating Systems, Machine Learning

Bachelor of Engineering

Birla Institute of Technology and Science (BITS)

India

Aug 2015 - July 2019

Skills & Certifications

- **Languages:** Python, R, C, C++, Java, SQL, Javascript
- **Tools and Platforms:** GIT, JIRA, Docker, Kubernetes
- **Frameworks:** Tensorflow, Keras, Scikit-learn, Pytorch, TensorflowJS, Flask, Kubeflow, REACT, Spring
- **Databases:** AWS Neptune, AWS Redshift, MongoDB, MySQL, HyperSQL
- **Machine Learning Techniques:** Inception, ResNet, Bert, Albert, Random Forest, SVM, XGBoost, KNN, Mobilenet, Knowledge Graph
- **Core Skills:** Machine Learning, Data Science, Data Analysis, Full Stack Development, WebSocket Programming, Cloud Computing

Work Experience

Machine Learning Engineer Center for Brain Health

Mar 2023 - Present

- Designed state-of-the-art NLP models based on **Roberta** and BERT algorithms for the automated evaluation of psychological task responses, attaining an **80% correlation** with human raters in areas such as logical reasoning, abstract thinking, and innovative problem-solving.
- Capitalized on the scalability and high-throughput features of AWS services, specifically **SageMaker**, **Redshift**, and **Glue**, to ensure a fault-tolerant and seamless deployment of the AutoScoring NLP engine.

Data Scientist Kotak Mahindra Bank

Jul 2021 - Apr 2022

- Led the design of an end-to-end pipeline for Agri-FinTech asset allocation, leveraging machine learning models for **data analysis and business performance optimization**, resulting in more strategic and efficient asset management.
- Created machine learning techniques to automate business analysis report generation, thus reducing turnaround time by 75% and enhancing operational efficiency across the organization.

Software Engineer Quantiphi Inc.

Jul 2019 - Jul 2021

- Leveraged AI for insurance claim adjudication, achieving 83% faster turnaround, 30% fewer errors, and 55% cost savings, bolstered by precise document digitization models at 95% accuracy via **Text Extraction** and **Entity Recognition** on AWS.
- Constructed a robust AWS Neptune-based pipeline for efficient **ontology and knowledge graph** creation, enhancing data organization in AI-driven insurance claim adjudication.
- Formulated an ML solution with Apache Airflow and TF records for unsupervised **Q&A generation**. Enhanced training speed with a high-performance pipeline for **ALBERT** and **ELECTRA** models on distributed TPU and GPU.
- Established a scalable AWS workflow for training and deploying containerized ML models, complete with a retraining pipeline using AWS Estimators and a monitoring solution for tracking **model drift**.

Software Developer Intern Ericsson

Jul 2018 - Dec 2018

- Achieved a **46%** reduction in testing time by implementing automated unit testing in OCC using the Code Pro Analytix plugin and **JUnit** framework in the Eclipse environment.
- Developed a robust pipeline for automated analysis of System Upgrade Framework (SUF) job log files, improving error identification and resolution efficiency, and reducing system downtime by 32%.

Projects & Research

Facial Expression Recognition using Deep Learning ([Github Link](#))

Mar 2023 - May 2023

- Engineered optimized deep learning models by leveraging **VGG16**, **MobileNetV2**, and **ResNet** through transfer learning, data augmentation, and fine-tuning, achieving a robust performance with 60% accuracy on the FER2013 dataset.

Medical Named Entity Recognition using Pre-Trained Language Models ([Github Link](#))

Apr 2023 - May 2023

- Designed and deployed **Named Entity Recognition (NER)** models in the medical domain finetuning pre-trained language models, specifically **BERT** and **ALBERT**. Achieved a significant F1-score of 0.8726 (BERT) and 0.8667 (ALBERT).

Real-Time Sign Language Detection Web Application ([Github Link](#))

May 2023 - Aug 2023

- Architected a robust, real-time sign language detection system leveraging **Javascript** and **React** for frontend development and **TensorFlow.js** for Machine Learning. The application accurately identifies and labels various sign language gestures in real-time.

PremierPulse: Soccer Statistics Platform ([Github Link](#))

Jan 2024 - May 2024

- Built an interactive and immersive platform for football statistics, on a robust tech stack featuring **Spring Boot**, **JPA**, and **React**. The platform is optimized to manage and analyze a voluminous dataset spanning 20 years, utilizing databases such as **HyperSQL** and **MongoDB**.

IMU-Health Profile-based Machine Learning Fall Detection System ([Paper Link](#))

Dec 2017 - Apr 2019

- Devised a Machine Learning fall detection system integrating IMU sensor and health profile data, enhancing detection accuracy by 20% and achieving a 95% accurate risk categorization.