SPOORTHY KUMBASHI RAGHAVENDRA

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EDUCATION

Texas A&M University, College Station, Texas **Aug 2025 - May 2027**
Master of Computer Science CGPA: **4.0**
Courses: *Deep Learning, Software Engineering, Analysis of Algorithms*

PES University, Bangalore, India **Aug 2019 - May 2023**
B.Tech in Electronics and Communication Engineering – **Gold Medalist** CGPA: **9.68/10**
Courses: *Data Structures, Machine Learning, Artificial Intelligence, Wireless Networks and Communication*

TECHNICAL SKILLS

Languages: Python, Java, SQL, MATLAB, LaTeX, HTML, CSS, Ruby on Rails
Frameworks and Tools: TensorFlow, Keras, Pytorch, Scikit-learn, Hugging Face Transformers, OpenCV, Numpy, Pandas, React, Flask, Django, Spring Boot, Cucumber, Jenkins, Git, Docker, Kubernetes

WORK EXPERIENCE

Software Engineer I, JP Morgan Chase & Co., Bengaluru **Jun 2023 – Jul 2025**

- Designed and deployed scalable **Spring Boot** microservices for processing 250-300k daily volumes of Foreign Exchange trades worth $10-15B, reducing operational risk and maintenance costs while improving system resilience.
- Built reusable **Java libraries** to support multi-**MQ** consumers and **Kafka** Ack/Nack handling between services, enhancing observability across platforms and reducing message debugging time by 4-5 hours per service.
- Migrated and optimized on-premise **Oracle databases** to cloud-based infrastructure with minimal downtime and optimized storage and query performance through **defragmentation** tasks.
- Converted the **REST APIs** between the UI and backend to **GraphQL** reducing frontend data processing complexity and improving load time by ~100ms.

Software Engineering Intern, JP Morgan Chase & Co., Bengaluru **Feb 2023 – May 2023**

- Led development of a real-time trade flow monitoring platform using **React** and **Spring Boot** that improved visibility across 20+ microservices, enabling faster root-cause analysis and smoother system operations.
- Implemented dynamic pod scaling, live log streaming and service health monitoring to enable granular tracking of trades and real-time failure alerts, cutting resolution time by 40% and enhancing support team efficiency.

Machine Learning Intern, Bosch, Bengaluru **Jun 2022 – Jul 2022**

- Engineered a **Natural Language Processing**-driven preprocessing pipeline using spaCy, NLTK and regex to transform symbolic reports into structured data by extracting key test parameters, enabling downstream ML model training.
- Developed a custom **position-based vectorizer** to encode term locations relative to a pivot element, boosting parsing accuracy of equations into LHS/RHS components by ~30% and ensuring accurate execution and validation of tests.
- Trained and optimised **Random Forest** and **SVM** models on structured Electric Vehicle component testing dataset achieving 85%+ accuracy in auto-generating test instructions, reducing manual effort by 60%.

PROJECTS AND PUBLICATIONS

Deep Learning for Signal Detection in RSMA Receiver ***Lead Author*** *@ IEEE NCC 2023;* **DOI** ***10068068***

- Developed an **LSTM**-based deep learning model for wireless signal detection, using temporal sequence modeling to reduce bit error rates and outperform conventional signal detection algorithms in noisy, multi-user beyond-5G channels.

Deep Learning for Radiogenomic classification of Brain Tumor ***Lead Author*** *@ IEEE INDICON;* **DOI** ***10039760***

- Led end-to-end research on transfer-learning with **ResNet** and **AlexNet** Deep Learning models to predict status of genetic biomarker from MRI scans for prediction of chemotherapy response in brain tumor patients.
- Optimised ResNet performance via 3D MRI slice extraction and advanced image augmentation/processing techniques, achieving **82% classification accuracy** on RSNA-MICCAI dataset for biomarker status prediction from MRI scans.

LLM-Powered Financial Filings & Stock Analysis

- Built an **LLM**-based pipeline to combine 10-K filings of publicly traded companies and stock market data to generate multi-year financial insights, qualitative valuations and comparative portfolio analysis for investment decision-making.

HONORS AND AWARDS

- **Gold Medal -** Ranked first in department for overall academic performance.
- **Six Merit Scholarships -** Recognized with Prof. C.N.R. Rao and Dr. M.R.D. Scholarship for sustained academic excellence.