SPOORTHY KUMBASHI RAGHAVENDRA

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ACADEMIC QUALIFICATION

B.Tech in Electronics and Communication Engineering,   **Aug 2019 - May 2023**
People's Education Society (PES) University, Bangalore, CGPA: 9.68/10, Gold Medalist

WORK EXPERIENCE

Software Engineer I, JP Morgan Chase & Co., Bengaluru   **June 2023 – Present**
- Collaborated on decommissioning a 40-year-old mainframe system as part of Derivatives and Foreign Exchange settlements team, implementing a strategic solution to replace it
- Designed a microservice architecture to processes trades worth $10–$15 billion daily
- Facilitated end-to-end integration testing with cross-functional teams, ensuring seamless interaction between upstream and downstream systems

PROFESSIONAL PROJECTS

Continuous Linked Settlements (CLS)   **Jan 2024 – Present**
Objective: Developed a microservice architecture using Spring Boot for settling CLS trades.
- Designed and implemented Java-based microservices optimized for high performance, capable of handling loads of up to 10,000 trades per minute
- Applied test-driven development (TDD) and adapted to changing requirements in an Agile environment
- Conducted infrastructure setup, including message queues (MQ), Kafka and GOS database, while managing CI/CD pipeline development and Kubernetes-based service deployments
- Facilitated the migration from legacy system to our platform, currently processing over 400k trades daily
- Developed Java libraries for internal services, including a multi-MQ message consumer and an ack/nack system for Kafka
- Reduced service setup time by 4-5 hours per new service by providing reusable, configurable libraries that streamlined the setup process

FX Transformation   **June 2023 – Dec 2023**
Objective: Enhancement of services developed for FX Options trade settlement
- Implemented features to improve the functionality and operational efficiency of services handling FX Options trade settlement
- Managed production environment during resiliency tests and engaged in high-priority stakeholder calls to implement urgent fixes for high-value transactions, ensuring operational integrity
- Developed Python utility services to automate repetitive tasks such as bulk data insertion and high-volume trade simulations, saving 3–4 hours of effort for the production support team

INTERNSHIP

Software Engineering Intern, JP Morgan Chase & Co., Bengaluru   **Feb 2023 – May 2023**
- Developed a React dashboard for real-time monitoring of microservices on Kubernetes cluster, with features for instance scaling and log streaming to enhance troubleshooting efficiency
- Implemented features to analyze individual trade flow and status, enabling quick identification of processing failures and boosting test environment support efficiency

Machine Learning Project Trainee, BGSW, Bengaluru   **June 2022 – July 2022**
- Developed a Proof of Concept NLP model to clean and analyze textual and symbolic data for automobile component testing, automating workflows within the hybrid electric vehicle battery management system (BMS) team
- Developed a Python tool to automate the extraction and comparison of test data against requirements, streamlining the process and reducing manual effort by 4-5 hours

ACADEMIC PROJECTS

Deep Learning for Signal Detection in RSMA Receiver　　　　　　**Jan 2022 – Dec 2022**
- Developed a two-tier, DNN based receiver architecture for a two-user uplink system in 6G networks using Rate-splitting Multiple Access (RSMA)
- Led the end-to-end research and model development
- Presented the findings at 2023 National Conference on Communications (NCC) as the lead author

Deep Learning for Radiogenomic classification of Brain Tumor　　　　**Jan 2022 – May 2022**
- Developed a CNN model that predicts the status of a genetic biomarker using MRI scans to assess chemotherapy success rates in brain tumor patients
- Led the end-to-end development of the model and presented the findings at 19th India Council International Conference (INDICON) as the lead author

Comprehensive Topic Summarizer using NLP　　　　　　　　**April 2022 – June 2022**
- Collaborated to develop a summarization tool that scrapes information from various websites to offer a comprehensive overview of a topic with relevant text, images, and citations
- Designed and implemented the user interface using HTML, CSS and Flask

AWARDS AND ACHIEVEMENT
Awards:
- **Gold Medalist,** awarded for achieving the highest academic performance in the department.
- **Prof CNR Rao Merit scholarship**, awarded four times for ranking in the top 5% of the department
- **Dr MRD Merit Scholarship**, awarded twice for ranking in the top 20% of the department

Publications:
- **K. R. Spoorthy**, S. B. Hudalimath, S. Medatati, V. Sinchana, A. K. Kowshik, and S. Gurugopinath. "**A Two-Tier Deep Neural Network Detector for Two-User Rate-Splitting Multiple Access Systems**." *2023 National Conference on Communications (NCC)*, Guwahati, India, 2023.
- **K. R. Spoorthy**, Akash R. Mahdev, Vaishnav B, and Shruthi M. L. J. "**Deep Learning Approach for Radiogenomic Classification of Brain Tumor**." *2022 IEEE 19th India Council International Conference (INDICON)*, Kochi, India, 2022.

TECHNICAL SKILLS AND CERTIFICATIONS
Languages, Frameworks & Tools: Java, Python, C, Spring Boot, React, MATLAB, SQL, TensorFlow, Keras, Jenkins, Kubernetes, Git
Certifications:
- Machine Learning Onramp (MathWorks, Jan 2022)
- Python for Data Science and Machine Learning (Udemy, Jun 2021)
- Machine Learning (Stanford Online, May 2021)

EXTRACURRICULAR ACTIVITIES
- **Teaching Assistant:** Organized lab sessions, graded assignments and projects for the Digital Image Processing course (Aug 2022-Dec 2022)
- **Class Representative:** Served as a liaison between students and faculty, effectively communicating student concerns and departmental decisions (Aug 2020 - May 2023)
- **Member of Women On The Move**: Volunteered with this business resource group at JPMC, which focuses on supporting the personal and professional development of women
- **Sustainability Hackathon**: Collaborated to develop a website that analyzes the carbon footprint associated with JPMC internal API calls
- **Event Host for Employee Appreciation Week**: Organized and facilitated a week-long series of events for over 200 participants at JPMC in 2022
- **Volunteer, Suraksha Charitable Trust, Bangalore**: Provided educational supplies and hosted activities for orphaned children aged 3-12