Jayashanmuhesh Rajasekar

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EDUCATION

Bouvé College of Health Sciences, Northeastern University, Boston, MA *Jan 2024 - Present*

Master of Science in Health Informatics *GPA: 4/4*

Related Coursework: Patient Engagement Analytics, Introduction to Health Informatics, Design for Usability in Healthcare, Built an ER-model for Personal Health Records (PHR) using MySQL.

Indian Institute of Technology, Bombay *July 2017- July 2021*

Bachelor of Technology in Metallurgical Engineering & Material Science

SKILLS

Pytorch, Azure DevOps, Git, Databricks, GCP, Python, SQL, Docker, Python, Deep Learning, C++

PROFESSIONAL EXPERIENCE

LTIMindtree, Bangalore, India | *Data Engineer* *July 2021 - Dec 2023*

MLOPS Center of Excellence (CoE) *July 2021- Feb 2022*

- Developed an image similarity model on AWS SageMaker to detect duplicate X-ray submissions, cutting fraudulent claims by 15%. Optimized Siamese network architecture, achieving 92% accuracy in identifying duplicate x-rays using techniques like histogram equalization and geometric transformations.
- Addressed limited training data by implementing data augmentation and transfer learning, improving model accuracy by 5%.
- Implemented an end-to-end ML pipeline on GCP with Vertex AI and Kubeflow, cutting deployment time by 20%.
- Developed CI/CD system with Docker and Cloud Build to automate ML pipelines, ensuring consistent environments and streamlined updates. Integrated automated model monitoring with Vertex AI to track metrics (precision, recall, F1-score) and trigger retraining on performance degradation.

KenAI - Model Monitoring Solution *Feb 2022- Jul 2022*

- Designed and implemented key components of KenAI, an AI model management platform, including a model tracking system using Postgres for real-time monitoring of performance metrics and efficient model maintenance.
- Developed modular components for KenAI to handle diverse data formats and model types, enabling automated monitoring, drift detection, and explainability features for multiple languages and ML frameworks. This ensured consistent model governance and improved transparency for various teams and projects.

Unilever *July 2022 - Dec 2023*

- Integrated existing modules and converted Python functions to PySpark, reducing runtime by 60% and enhancing data processing efficiency. Developed ML models to extract grammage details from product titles, enabling data-driven conclusions across country-category combinations (e.g., IN Facecare).
- Created "Rising Stars," a module that identified emerging brands by applying elimination criteria based on QoQ and market growth. Analyzed metrics to understand success factors, providing insights for strategic planning and business development.
- Integrated search terms with sales data to identify market trends through search rank frequencies and utilized these insights for operational decision-making, optimizing resource allocation and product positioning.

PROJECTS

RAG Assistant for Clinical Trial Documents | App link *Apr 2024 - July 2024*

- Developed a Clinical Trial Protocol Assistant leveraging open-source LLMs (Meta-Llama-3-8B, Mistral-7B) and implemented a RAG solution, enabling healthcare professionals to upload process, and query clinical trial documents.
- Enhanced user experience and trust in the healthcare application by implementing key features: a source display for answer transparency, and preconfigured prompts offering common clinical trial questions, resulting in improved efficiency and reliability for healthcare users interacting with complex trial documentation.