Ameya Rane

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Available: Jan 2023 onwards

EDUCATION

Northeastern University, Boston, Massachusetts   Expected May 2024
Khoury College of Computer Sciences
MS in Computer Science, 4.0 GPA
Related courses: Artificial Intelligence, Programming Design Principles, Natural Language Processing, Algorithms, Large Scale Parallel Data Processing
- Technical Core Member for Google Developer Student Club, INFORMS Student Chapter
- Teaching Assistant for Algorithms and Data Structures, Discrete Structures (Honors Section)

College of Engineering Pune, Pune, India
Minors in Computer Science, 9.75/10 GPA

TECHNICAL KNOWLEDGE

Languages:	Objective C , C++ , Java , SQL , JavaScript , Python, Scala, DLang, Go, TypeScript
Frameworks:	Node/ Express , MongoDb , Angular , Bootstrap , TensorFlow , NLTK, Hadoop MapReduce, Spark, PyTorch
Software:	MATLAB/Simulink , Toad , Microsoft Office Suite, Git , Jenkins , Microsoft Azure, AWS, Docker
Certifications:	Microsoft Certified: Azure Fundamentals, Rasa Developer Certificate, Deep Learning Specialization

WORK EXPERIENCE

Tata Consultancy Services   August 2019 - September 2022
Lead Frontend Developer
- Led an agile team of 4 front-end engineers to establish landing pages for a major multinational company with **HTML/CSS/Javascript/Bootstrap ,JQuery,Adobe Experience Manager**
- Created loading and manipulation scripts for over 40 table schemas using **Oracle SQL** and **Toad**, and performed optimizations by porting **SQL** code to **Spark** (**PySpark**)**,** and **Hive** reducing query execution time by 25%
- Constructed 2 new API endpoints on **Node/Express** and **Apigee** to query and retrieve data from **Oracle SQL** database.
- Organized key landing pages overhaul to improve SEO performance rating by 60% by reworking **JavaScript** files
- Conceptualized and deployed full stack chatbot for career page powered by **Rasa** framework, **Angular, Typescript** and **MongoDb** handling queries for 6 different career programs and generalized chitchat with an intent classification accuracy over 96%
- Created NLP training data entry portal using **React**, **MySQL**, **Passport**, **Docker**, **GitLab**, **Jenkins** and **Node/Express** with Responsive UI across all the frequently used screen dimensions on **RedHat Azure VM**
- Improved **SEO** score on lighthouse by 40% using **Google Analytics** and **Javascript** Refactoring on key webpages
- Built interactive dynamic graph visualizations for financial data obtained through web scraping using **D3.js**

ACADEMIC PROJECTS

Parallelization of Apriori Frequent Itemset Mining   May 2023 - July 2023
- Developed Parallel version of Apriori Frequent Itemset Mining Algorithm in **Apache Spark** using **Scala** and **Java** with pruning step and distributed Hash Tree implementation on Sequence count of over 77000 with 3340 unique items
- Ran algorithm on **AWS EMR, S3** and evaluated speedup and runtime with different hyperparameters and clusters

Automatic Text Summarization   February 2023 - May 2023
- Programmed and evaluated 4 different models for Automatic Text Summarization using **Python**, **Keras**, **Tensorflow**, **Scikit-learn, Pandas, Jupyter** and **Huggingface**
- Developed and evaluated performance of **BERT**, MMR and Centroid Ranking and with transfer learning with **PEGASUS** to generate prompts for **Stable Diffusion model,** achieving precision of 0.812

NLP based Product Recommendations   September 2022 - December 2022
- Modified BERT Architecture to predict latent user feature vectors generated from Alternating Least Squares Algorithm from Yelp Reviews Data using **Python, Pandas, HuggingFace, TensorFlow, Keras** and **Azure** Machine Learning
- Evaluated Performance of 5 variations of the BERT architecture (RoBERTa, DeBERTa, DistilBERT, AlBERT)

Stock Portfolio   September 2022 - December 2022
- Created stock management system with real-time data from Vanguard API in **Java** with **Java** Swing based GUI with data persistence and performance optimization by following SOLID principles and MVC architecture
- Created comprehensive testing suite with randomized data inputs in **JUnit**