PARAG GHORPADE

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EDUCATION

Khoury College of Computer Sciences - Northeastern University, Boston, MA **Expected May 2024**
Master of **Data Science** GPA: **3.6/4.0**
Related Courses: Supervised and Unsupervised Machine Learning, Algorithms, Natural Language Processing (NLP), Data Processing
Graduate Teaching Assistant CS 5340 Human Computer Interfaces, Large-Scale data processing

University of Pune, Pune **Aug 2017 - May 2021**
Bachelor of Computer Engineering GPA: **9.02/10**
Related Courses: Data Structures, Machine Learning, Mathematics, Statistical Modeling, Artificial Intelligence, Data Modelling

TECHNICAL SKILLS

Programming Languages: **Python**, **R**, **SQL**, MATLAB, C/C++, CUDA
Software: AWS (Athena, S3, Sagemaker, Elastic Compute), Jupyter, Git, Jenkins, Docker, Kubeflow, Kubernetes, Databricks
Framework: Unix, TensorFlow, Keras, Flask, MLflow, Sklearn, PyTorch, Apache Spark, Large Language Modelling

EXPERIENCE

Ribbon Communications, Boston, MA **Aug 2023 - Dec 2023**
Data Scientist Co-op
- Architected and deployed **BERT**-based network classifier software to elevate the Ribbon Session Border Controller (SBC) product.
- Harnessed reinforcement learning and Large Language Models (**LLM**) to fortify secure communications and mitigate malware.
- Achieved 97% classification accuracy and created a cloud-based solution for data acquisition and real-time analysis.

Integral Ad Science, Pune, IN **July 2021 - Aug 2022**
Full-Stack Software Engineering – Data Science
- Reduced **language translation** costs by 50% by training in-house **LSTM-based encoder-decoder** model and sequence labeling, served on AWS Sagemaker and EKS. Achieved an accuracy of over 88% in sentiment analysis.
- Implemented scalable microservices on **Kubernetes**, 60% reduction in downtime and 35% increase in performance.
- Spearheaded and led a team to create a novel product featuring **computer vision**-based context analysis and fraud detection with caffe in 3D vector space physics for metaverse advertising, winning first place at Global Vista Hackathon [Patent].

Centre for Development of Advanced Computing, Pune, IN **July 2020 - Apr 2021**
Software Engineering Intern
- Implement scalable and efficient models on large-scale datasets to address satellite and LiDAR data for flood forecasting, covering an extensive 100 sq miles area.
- Optimized flood forecasting accuracy to 88% by employing innovative **CNN algorithms** and rigorous data QA testing, transforming raw satellite and LiDAR data into actionable disaster management insights for authorities.
- Collaborated with cross-functional teams, utilized agile methodologies for efficient project management.

CSIR-Central Drug Research Institute (CSIR-CDRI), Pune, IN **May 2019 - June 2019**
Data Science Intern
- Designed a **Graph Neural Networks** (GNNs) - GAT (Graph Attention Networks) model to predict the spread of infectious diseases based on factors such as population density, mobility patterns, and social interaction data sets, visualized on an area map.
- Enhanced predictive capabilities of the model by integrating multiple diverse datasets and refining the GAT parameters.
- Achieved improvement in accuracy and reliability of infectious disease spread predictions by 13%.

PROJECTS

Norsent, https://norsent.com **Jan 2022 – Jan 2023**
- Self-developed e-commerce business, leveraging cookies to feed user behavior into a recommender system to effectively target relevant audiences and employ **advertising and digital marketing** to increase sales (18%) and overall revenue.

Profit Prophets **Sept 2022 - Mar 2023**
- Engineered a Software System with advanced web scraping and cleaning techniques, NLP-NLTK to predict stock prices and display financial estimates with PowerBI. Employing TensorFlow and GCP to develop a user-friendly website.

Publication and Presentations
- **4 International research papers**: computational intelligence and deep learning techniques for disease detection using chest radiographs, firm position forecasting based on Pitroski's F-score using ARIMA, comparing deep learning architectures for sentiment analysis and Large-Scale Flood Mapping with SAR Data and Impact Assessment.

EXTRA-CURRICULAR AND LEADERSHIP ACTIVITIES

Led an on-campus **Google** Developer Student Club – Solving Business Problems, decision making, and writing blogs and training students.
Expertly managed and mentored two interns for the development and troubleshooting of a recommender system-based internal product.