Abhishek Sandeep Firodiya

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EDUCATION

North Carolina State University (NCSU), Raleigh, NC May 2024
Master of Computer Science **GPA: 4.0/4.0**
Related Coursework: Design and Analysis of Algorithms, Automated Learning and Data Analysis, Fundamentals of Data Science, Database Management System, Neural Networks and Deep Learning, Human Computer Interaction, Social Computing, LLM

Pune Institute of Computer Technology, **Maharashtra, India** April 2020
Bachelor of Engineering in Information Technology **GPA: 9.28/10**
Related Coursework: Data Structures, Machine Learning, Software Engineering, Web Development, Computer Network

SKILLS

Programming and Machine Learning : Python, R, Pandas, NumPy, Scikit-learn, Data Visualization, Feature Engineering
Databases : MySQL, MongoDB
Operating Systems : Ubuntu (Linux), Windows, MacOS
Tools & Frameworks : Tableau, Git, JIRA, Frappe Framework
Web Development : JavaScript, TypeScript, HTML, CSS, Bootstrap, React, Angular, Rest API

EXPERIENCE

- **Software Engineer @ Elasticrun, Maharashtra, India** July 2020 - June 2022
  - Engineered a Sales and Operations Planning tool for field managers using Python, RestAPI, Javascript, HTML, and CSS which reduced **planning time from 15 days to 3 days**.
  - Pioneered the development of a brand platform, using Javascript, Python and MySQL **optimizing the time to generate insights from 2 days to 2 minutes** for metrics such as sales, throughput, customer engagement, and reach of partner brands.
  - Performed on all levels of the software engineering cycle from documentation to testing, maintenance, and support of all the platforms I built which allowed me to develop the ability to work efficiently and effectively as part of a team.

PROJECTS

- ***Partial Face Recognition*** **| Missing Person Finder**
  - Conceptualized and developed a responsive platform leveraging *Python, DJango, HTML, CSS, Bootstrap, Javascript, MySQL,* and *Android*, **to reduce missing person recovery time from months to days** by partial face recognition.
  - Launched the system nationwide in collaboration with the National Crime Records Bureau, Ministry of Home Affairs, India.
  - Managed and organized a dataset of over 30000 images and implemented Machine Learning algorithms for efficient matching.
  - Structured the workflow using UML diagrams, designed a robust database schema, and expanded the system's capabilities to analyze images from CCTV footage, enhancing its effectiveness in locating missing people.
- ***Machine Learning*** **| Fake Job Posting Classifier**
  - Developed a tool using *Python*, *Numpy* and *Pandas* that uses classification models like K-nearest algorithms, Decision Trees, Logistic Regression, and Naive Bayes to classify the job posting as fake and legitimate with **94% accuracy**.
  - Visualized results of classification using *seaborn* and *matplotlib*. (https://tinyurl.com/mlclassify)
- ***Deep Learning*** **| Terrain Identification from Time Series Data**
  - Investigated Deep Learning models like Bi-LSTM and Random Forest to classify multiple terrains from time-series data captured with the help of an accelerometer and gyroscope sensor attached to the prosthetic lower leg limb.
  - Performed data preprocessing on time-series data to match the frequency of the data from multiple sensors (10Hz) and data labels (40Hz) using undersampling and oversampling techniques (SMOTE).
  - Achieved **93% accuracy** and **86% F1-score** over unseen test data using Bi-LSTM model. (http://tinyurl.com/dlterrain)
- ***Natural Language Processing*** **| Software Mentions Extraction**
  - Automated extraction of software mentions from published biomedical literature using methods based on NLP.
  - Fine-tuned the SciBert pre-trained model with SoMeSci dataset using transformer technique. (http://tinyurl.com/nlpbiomed)
- ***Database Management System*** **| Food Ordering and Pickup System**
  - Architectured a Food Ordering and Pickup System using *Python, HTML, CSS, Bootstrap, Javascript, JDBC,* and *MySQL*, enabling menu management for restaurants, online ordering for customers, and data visualization for admin.
  - Integrated various services within the system, including onboarding new customers and restaurants, facilitating food ordering, cart management, and efficient order tracking.
- ***Data Analysis*** **| AdventureWorks**
  - Collaborated in a team of three to analyze a segment of the AdventureWorks database, focusing on queries such as Big Customer, Loyal Customer, Best Selling Products, and Customers Buying Only a Single Product.
  - Leveraged *Tableau* to create an informative dashboard to provide valuable insights and data visualization.

LEADERSHIP

- **PICTOREAL - PICT Annual Magazine: Joint Secretary, Event Manager** - Oversaw 100+ students, organized diverse events including social events like blood donation and fundraising campaigns, recreational events for seniors at old age homes, etc.
- **Maitri-Indian Graduate Student Organization NCSU: Digital Media Head** - Generate content for Social media.