Tejul Pandit

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Education

Northwestern University — Evanston, USA
Master of Science in Artificial Intelligence; ***GPA: 4.00/4.00*** — *September 2021 - December 2022 (Expected)*
Relevant Courses: Artificial Intelligence, Machine Learning, Data Science Fundamentals, Natural Language Processing, Deep Learning

K. J. Somaiya College of Engineering, Autonomous College Affiliated to Mumbai University — Mumbai, India
Bachelor of Technology in Electronics & Telecommunication; ***CGPA: 8.65/10.00*** — *August 2014 - May 2018*
Relevant Courses: Data Analysis and Interpretation, Data Modelling and Visualization, Neural Networks and Fuzzy Logic, Big Data Analytics

Experience

CRISIL Limited, An S&P Global Company — Mumbai, India
Software Engineer - Data Science — *March 2021 - June 2021*
Senior Associate - Data Science — *October 2019 - March 2021*
Associate - Data Science — *June 2018 - October 2019*

Key Responsibilities:

- Built the first company-wide AI project using a CNN model to classify **500+** news articles daily into respective sectors and corresponding sub-sectors with an **accuracy of 87%**
- Designed a solution to extract key highlights from rating reports by applying K-means clustering algorithm on Skip-Thoughts generated sentence embeddings.
- Developed a product to deduplicate news articles from different sources and classify them into macro-level sectors using BERT-base, uncased architecture as encoder. An abstractive summary of the news story is generated by implementing LSTM based sequence-to-sequence (seq2seq) model with attention mechanism increasing efficiency across all verticals of CRISIL, saving **150 person-hours daily**.
- Implemented Random Forest classifier to identify specific information (document name, document type) from documents to achieve an **accuracy of 83%** in collaboration with the technical team of S&P Global.
- Created Bank Statement Analyzer using Flask-API to classify transactions, analyse the data, and detect fraudulent transactions for one of the largest Indian Bank used by **1000+ concurrent analysts**.
- Identified trends by segmenting salaried and non-salaried customers for a Forbes Top 20 Middle Eastern Bank using K-means clustering.

Key Achievements:

- Conferred with the **Bright Spark Award**, a quarterly award, for hard-work and consistent performance in the field of AI during *Q2'19*.
- Received **CRISILite Award for Performance (CLAP)** for the month of *August 2018* for exemplary performance and delivering projects involving NLP and deep learning technologies at CRISIL.

Academic Projects

Search Query on User Generated Comments — *September 2021 - Present*
Advisor: Prof. Nicholoas Diakopoulos, Computational Journalism Lab

- Collected articles with corresponding user comments using New York Times API to generate approximately **10,000 comments** catering to various articles.
- Using **GPT-3** to develop a solution to search UGC's from hundreds of comments on an article that align with the journalists' query.

Diagnostic screening of genetic syndrome using Facial Landmark recognition [Code Link] *September 2021 - December 2021*

- Developed machine learning solutions to determine if a patient has Congenital central hypoventilation syndrome (CCHS) syndrome given the information about the patient's facial landmarks, age, race, and sex, a total of **136 features**.
- Implemented Random Forests and Artificial Neural Networks to achieve an **F1-score** of **99.5%** and **99.7%** respectively.

Influence of Race and Ranking in Chicago Police Department [Code Link] *September 2021 - December 2021*

- Used data from CPDB to determine the relationship between allegations against police officers and the impact that their race or rank has on these allegations being sustained.
- Analyzed the data using **PostgreSQL**, visualized on **Tableau** and performed topic modeling on allegation text using **Bertopic** to get 6 major areas in which allegations could be clustered to help visualize the behaviour trends in an officer.

Peer-Reviewed Conference Papers

T. Pandit et al., "**Abnormal Gait Detection by Classifying Inertial Sensor Data using Transfer Learning**", 2019 18th IEEE International Conference On Machine Learning And Applications (ICMLA), 2019, pp. 1444-1447.[Code Link] [Paper Link]

Skills

Languages: Python, R, SQL, Java, C++, MATLAB, LaTeX
ML/Deep Learning Frameworks: Scikit-Learn, Tensorflow, Keras, PyTorch
Libraries: Scipy, Numpy, Pandas, Plotly, Matplotlib, NLTK, Spacy, Gensim
Tools: AWS (EC2, S3), GCP, Git, Google Colab
Visualization: Tableau