Tejul Pandit

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Education

Northwestern University — Evanston, USA
Master of Science in Artificial Intelligence — *September 2021 - December 2022 (Expected)*
Coursework: Introduction to Artificial Intelligence, Machine Learning, Data Science Fundamentals, Frameworks for Artificial Intelligence

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 Coursework: Data Structures and Algorithms, Object Oriented Programming, Data Analysis and Interpretation, Data Modelling and Visualization, Operation Research, Neural Networks and Fuzzy Logic, Big Data Analytics, Cloud Computing

Professional 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 **87% accuracy**.
- 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 the *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

Gait Analysis using Sensors and Artificial Intelligence [Code Link] | *Python, Arduino* — May 2017 - May 2018

- Developed a low-cost prototype that analyzes humans walking style to diagnose neurological disorders.
- Synchronized data obtained from 4 sensor modules fastened to the subjects' legs and converted them to JPEG images to collect a total of **4500 sample images**.
- Trained the bottleneck layers of deep CNN model, Inception V3, to classify images obtained into set of walking styles and achieved run-time **accuracy of 78%** on test subjects.

Modeling of Microstrip Antenna [Code Link] | *R, Excel* — March 2018 - March 2018

- Simulated a microstrip antenna in HFSS software to obtain transmitting/receiving power of the antenna (gain) by modifying the various design parameters to generate **2,194** combinations of unique antenna designs for frequencies ranging from 1GHz to 12GHz.
- Implemented KNN Regression to optimize the time taken to calculate gain of test samples with **95% accuracy**.

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. [Paper Link]

Skills

- **Languages**: Python, R, SQL, Java, C++, MATLAB, LaTeX
- **ML/Deep Learning Frameworks**: Scikit-Learn, Tensorflow, Keras
- **Tools**: AWS (EC2, S3), GCP, Git, Google Colab

Additional Experience & Achievements

- Mentor at **The Lighthouse Project**, a not-for-profit organization, for an underprivileged student as part of their one-on-one mentoring program from *September 2019* to *July 2021*.
- Won first prize at **Prakalpa'17**, State level Competition (out of approximately 500 students) in the category Neural Networks for the project 'Gait Analysis using Sensors and Artificial Intelligence'.