Neelisha Saxena

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**Experience**

**Microsoft**  Nov 2021 - Current

**Smart Date Parser:** A rule-based **date-time recognition** system was implemented in C# for a Windows ToDoapplication, building on the work done by the open source Microsoft Recognizers-Text package, contributed back to the repository by resolving issues and introducing new functionality.

**Grocery Item classification:** Data cleaning & analysis on WunderList grocery dataset for improving Auto Categorize feature in ToDo Android app. Using Dask to parallelize calculations, preprocessing and analysis of a dataset with 10M text rows were completed more quickly.

**Machine Learning Engineer at Think Future Technologies**  Sep 2020 - Oct 2021

**Activity recognition:** Productionised a system using Kafka producer consumer model for real-time activity recognition on the input of an ip-camera using a pose estimation model for the chemical industry.

**Search engine for legal document :** A search engine for finding any person’s (or organization) involvement in an Indian legal case. The engine has filters like accuser or accused, address, age, relative's name, etc.

I was involved in extracting data from unstructured legal documents**.**

* Achieved 80% document level accuracy on deployed solution.
* Trained Yolo v4 for localisation text cluster blocks (accuser or accused).
* Trained NER model on CoNLL-03 using stacked embeddings (Flair + Roberta)**.**

**Data Scientist at ParallelDots** Jan 2019 - Aug 2020

**Menu Digitisation** : Worked on Food-menu parsing for mapping Item name to its price and category it belongs to. Using CRAFT (and EAST) text detector along with Tesseract for text reading in Image and trained block detector and fuzzy matching for improving result.

**Invoice Parsing** : Converting image invoice to excel data format using Table detection algorithm and OCR with 90% accuracy.

**Product detection** : Trained RetinaNet for object detection and ResNet for classification of given products present on shelf,the major challenge was doing fine-grained classification.

**Demand Forecasting** : Developed Demand Forecasting tool for a cigarette company for their different brands.performed statistical data analysis, feature engineering and Implemented Facebook Prophet and XG-Boost model for forecasting.

**Trend Spotification** : Developed a tool to detect the change in the trend of Co-Curricular demand for a product in different cities. The major challenge is handling very short time-series data for each brand-city pair along with different sets of important features.

**Sentiment classification:** Worked on text-analytics pipeline like Text-Classification, Sentiment analysis.

**Education**

B.Tech. (Computer Science Engineering) : JSSATE, Noida (2015-2019) : First Division (Hons)

12th (CBSE) : Mariampur Sr. Sec. School,Kanpur (2014) : 90 %

**Publication & ACHIEVEMENTS**

* Short Term Load Forecasting Using Various Approaches [(Springer proceedings)](https://link.springer.com/chapter/10.1007%2F978-981-15-0751-9_68)
* [Kaggle bronze medalist](https://www.kaggle.com/elishaj) (home credit default risk challenge)
* 1 st position in Hack 2 Innovate hackathon in Samsung and Nvidia rounds.
* Winner of CodersBit competition organized by InterviewBit on a national level.
* Among the top 10 teams at the grand finale of [Smart India Hackathon](https://drive.google.com/file/d/13B6yTGLZCYJBlvRdOO14hEj2JF2fEV37/view?usp=sharing).

**Technical Skills :** Python, Keras, Pytorch, OpenCV, Vision API, Tesseract, PyMC3, FBProphet, Sklearn, Gensim, NLTK, Seaborn, Numpy, Matplotlib, Pandas, Flask, Apache Kafka, Confluent-kafka, Docker, Asana, Linux, Git, AWS, GCP.

**Internship**

**Research Engineer at Vidooly**  JUN 2018 - SEP 2018

Worked on projects based on ad targeting which consists of two sub-projects:

**Detecting Not Safe For Work (NSFW)** **frames in a video** : Implemented yahoo NSFW model on Caffe to classify frames of a youtube video have the following content present: Nudity, Violence or Kiss scene.

**YouTube videos genre classification using metadata** :Video genre classification was done using titles, tags, and descriptions of the videos.