# Pranjal Gupta

http://xs2pranjal.github.io
xs2pranjal@gmail.com • (+91) 9451876022

## EXPERIENCE

### METRIPPING TECHNOLOGIES | MACHINE LEARNING ENGINEER
September 2018 – Present | Bangalore, IN

- Price Prediction
  - Individually handling development of price prediction and ranking models for flights and hotels.
  - Implemented Deep Learning methods for some very frequent itinerary pair, with a significant 19.8% increase in accuracy.
- Entity Recognition and Similarity Model
  - Trained custom Named-Entity-Recognition for identifying attractions for a destination.
  - Developed similarity algorithm that recreates word vector using pre-trained character embeddings and model weights.
- Training Architecture and Orchestration
  - Designed Training Architecture for Spark using acyclic-directed-graphs.
  - Orchestration reduced human involvement to 1/10th.
  - Further engineered to populate Elastic-Search index too.

### ARTIVATIC DATA LABS | ML NLP ENGINEER
September 2017 – September 2018 | Bangalore, IN

- NLP Engine
  - Managed a team of 3 in developing/maintaining NLP Tools-Engine, alongside designing the backend.
  - Implemented aspect level sentiment analysis using double propagation in python.
  - Extended sentiment classification with Character Level Classification, and revamped the accuracy from 49.8% to 66.7%.
  - Co-Developed Context Detection, using Stanford Glove Model and optimized loading time from 6 mins to 7 milliseconds.
- Financial Intelligence
  - Credit Scoring Module to quantify creditworthiness of an individual with 3rd party integration for aggregating transactional data.
  - Bank Statement Analysis from description to extract recommendation aspects.
  - Extended code to find outliers which were used for detecting abnormal transactions.
- Information Extraction
  - Developed a grammar-based extraction technique using nested chunking of POS tags.
  - Automated the process with a semi-supervised approach using dynamic programming paradigm.
  - Achieved an accuracy of 89% for policy number across 180 documents in the insurance domain.
- Others
  - Developed denial prediction models for RCM cycle.
  - Handled concurrency by deploying the application using WSGI server, optimized load balancing by reducing an average API latency to 52 milliseconds with 50 users.

**KRYPTOBLOCKS** | ARTIFICIAL INTELLIGENCE INTERN
June 2017 – August 2017 | Bangalore, IN

- Facial Emotion Recognition
  - Developed and implemented real-time face detection with openCV.
  - Co-Developed emotion classification using DeepCNN with dataset provided by CMU.
- Attentiveness Detection
  - Implemented facial landmark detection using HOG and linear SVM in python.
  - Extended code to detect the state of a person's eyes, i.e. open or closed and count eye blinks.

## EDUCATION

**B.TECH.**
ELECTRICAL & ELECTRONICS ENGINEERING
UNITED COLLEGE OF ENGINEERING AND RESEARCH
ALLAHABAD, IN | 2016

## SKILLS

**LANGUAGES**
Python • Java • Scala
Matlab • pySpark • LaTeX• C

**FRAMEWORKS**
Play • Apache Hadoop • Flask

**LIBRARIES**
Tensorflow • Keras • PyTorch
openCV • ntlk • gensim • Theano

**DATABASE**
Cassandra • Redis • PSQL • Mongo

**OTHERS**
Raspberry Pi • Arduino

## PROJECTS

**LOAD FLOW OPTIMIZATION USING BACKPROPAGATION**
Paper Presentation | IIT Roorkee
- Feasibility study for approximating steady state operating conditions of a power system, using NN design.
- Replaced costly matrix calculations on each network node, by analogous weights of a neural network.
- Ranked 2nd out of 20 teams all over India.

**AUTOMATIC IDENTIFICATION MODULE**
Embedded | IIT Roorkee
- Developed an Automatic Challan System, using RFID EM18 interfaced with an Atmega32.
- The System was able to identify a vehicle at two distinct known places and calculates its speed, which further extended to detecting Traffic light jumps.
- Presented a Paper in Innovision held at IIT Roorkee

## ACHIEVEMENTS AND EXTRA CURRICULARS

| | |
|---|---|
| Ranked 2nd | Tensor Optimization of Load Flow with Backpropagation, Paper Presentation, IIT Roorkee |
| Gold Medal | Rotary Science Festival' 10, Inter School Science Championship (Out of 27 Schools) |
| Paper Presentation | Automatic Identification Module, Innovision, IIT Roorkee |
| Organizing Team | RoboZires, Society of Robotics, UCER Ald. |
| Rhythm Guitarist | UnAuthorized Destiny, local band |