

SUNMARG DAS | 17ME10062

MECHANICAL ENGG.(B.Tech 4Y) MINOR in COMPUTER SCIENCE & ENGG. (B. Tech 4Y)



EDUCATION

| Year | Degree/Exam | Institute | CGPA/Marks |
|------|-------------|---------------|------------|
| 2021 | B.TECH | IIT Kharagpur | 8.58 / 10 |
| 2017 | AISSCE | CBSE | 93.2% |
| 2015 | AISSE | CBSE | 10 / 10 |

INTERNSHIPS

AB Inbev | Operations Analytics Intern | Bangalore

May 2020 - Jul 2020

- •Developed an Overdue Forecasting Model which takes into account the Covid-19 crisis and adjusts its' prediction accordingly
- •Model predicts the forecast of rolling 12 months with an accuracy of >90% for UK and Germany even after the crisis
 •Created a Customer Profile Data which categorizes customer on different risk levels based on their previous payment record

Legal Data Analytics | Research Intern | IIT Kharagpur

May 2019 - Jul 2019

- Principal Investigator: Prof. Saptarshi Ghosh (Computer Science and Engineering Department, IIT Kharagpur)

 •Prepared a dataset comprising over 30 million+ data containing different stage wise criminal cases from last 30 years
- •The dataset contains the caseid, state, district, year and the court the case was registered in, along with their pending duration
- Collected the data from the official website: https://njdg.ecourts.gov.in/njdgnew/index.php using web scrapping
- •Calculated the correlation matrix of different states with the stagewise criminal case type and pending duration

Research Guruji (Work From Home) | Research Intern | Internshala

Jun 2019 - Jul 2019

- Summarized papers on Spelling Correction model for end to end speech recognition, Assessing the factual accuracy of Generated Text, Improving Language Understanding by Generative Pre-Training & Decision Trees & NNs for Leaning to Rank
 •Wrote a survey paper named Spelling Correction model for Speech Recognition and using it for Generative Pre-Training

PROJECTS

Predict next word using Statistical and Neural Language Modelling | IIT Kharagpur

Aug 2019

- Principal Investigator: Prof. Sudeshna Sarkar (Computer Science and Engineering Department, IIT Kharagpur)
- •Tokenized the corpus into sentences and words, performed case folding on the corpus and removed stopwords from the corpus
- •Created 4 language models, i.e., uni, bi, tri and four-gram, and used these models to predict next word of given context
- Used LSTM Language modelling to train different word vectors and for predicting the next word of the given context

Part of Speech (POS) tagging using Conditional Random Field (CRF) | IIT Kharagpur

Aug 2019

- Principal Investigator: Prof. Sudeshna Sarkar (Computer Science and Engineering Department, IIT Kharagpur)
- •Trained a CRF model using the available sklearn crfsuite wrapper and used Universal Dependency Hindi corpus for training
- •Introduced new features and tuned the hyperparameters to achieve the maximum possible F-score on the training set •Calulated Precision, Recall, F-score per unique POS tag on the train and the test set and overall accuracy of train and test set

Ranking of documents' of different cases | IIT Kharagpur

Jun 2019- Jul 2019

- Principal Investigator: Prof. Saptarshi Ghosh (Computer Science and Engineering Department, IIT Kharagpur)
- Preprocessed document text of query by applying NLP preprocessing techniques, viz. stemming, tokenizing, case folding, etc.
 Learnt the basics of Information Retrieval Manning,i.e., TF-IDF weighting, TF-IDF cosine scores, boolean model,etc.
 Calculated the cosine similarity of a query with different documents so as to predict the chance of winning or losing the case

AWARDS AND ACHIEVEMENTS

- •Smart Odisha Hackathon (Data Analytics) finalist and among the Top 80 teams out of 1500 teams at National Level in 2018
- •Secured state rank 2 and All India Rank 4 in International Talent Hunt Olympiad, 2014 conducted by Silverzone Foundation
 •Secured state rank 21 in West Bengal, Andaman and Nicobar Zone in 1st level of 17th SOF National Science Olympiad, 2014

SKILLS AND EXPERTISE

Data Analysis | Data Visualizaton | Data Wrangling | Natural Language Processing | Machine Learning | Programming in C,C++, Python | Data Mining | Probability and Statistics | Deep Learning | | Web Scrapping | Tableau | Advanced Excel | Power BI

CERTIFICATIONS

Deep Learning Specialization | deeplearning.ai | Coursera

April 2020

Deep Learning Specialization: Master Deep Learning, and Break into AI (By Dr. Andrew Ng)

 This five course specialisation covered Neural Networks and Deep Learning, Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization, Structuring Machine Learning Projects, Convolutional Neural Networks and Sequence Models; working on case studies from healthcare, autonomous driving, music generation, etc.

COURSEWORK INFORMATION

Natural Language Processing | Probablity and Statistics | Programming and Data Structures | Machine Learning | Neural Networks and Deep Learning | Convolutional Neural Networks | Design and Analysis of Algorithms | Information Retrieval | Computational Modelling of Multiphase Reactive Flows | Thermodynamics | Fluid Mechanics | Design Optimization

EXTRA CURRICULAR ACTIVITIES

- Secured runner's up position in fresher's Table Tennis Tournament held at IIT Kharagpur in 2017
- •Represented LBS Hall of Residence and Meghnad Saha Hall of Residence in Inter Hall Table Tennis Tournament
 •Represented DPS, Farakka in Inter Dps National's Table Tennis Championship and was the Captain of Under 14's team
- •Represented Delhi Public School, Farakka in Inter School Football Championship and served as the Captain of the Team