SURAJ SUVENDU CHATTERJEE

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OBJECTIVE

Seeking a responsible career opportunity to fully utilize my training and skills, while constantly learning and making a significant contribution to the success of the company. Equipped with astute observational capabilities and the ability to challenge unique problems and hypotheses with an organized mindset through the scientific process.

EDUCATION

University of Mumbai — Mumbai, India

Bachelor of Engineering — **July 2017 - June 2021**

- Major in Information Technology
- CGPA: 9.28 / 10
- Relevant Coursework: Data Structures and Algorithms, Database Management System, Artificial Intelligence, Cloud Computing and Services, Big Data Analytics, Internet Programming, Computer Networks, and Software Engineering with Project Management

EMPLOYMENT EXPERIENCE

MONSOON CREDITTECH — Mumbai, India

Machine Learning Engineer — **July 2021 - Present**

- Built various credit risk scorecards such as Collections Scorecard, predicting the probability of default in the next 3 months with a performance of ~85% AUC
- Handled end-to-end project development and deployment of credit risk scorecards for Indian Banks and NBFCs
- Created custom performance evaluation metric scripts measuring the performance of credit risk scorecards over time
- Optimized and implemented multiprocessing in data processing scripts which increased processing speed by 90%
- Analysed data and created presentations with visualizations depicting the analysis for client and stakeholder's understanding
- Gained deep familiarity with PyData Stack (Pandas, Numpy, Scikit-Learn), Bayesian Hyperparameter Tuning (Optuna), Ensemble Boosted Trees (LGBM, XGBoost), Feature Selection (RFE, Boruta) and deployment technologies such as Django, Docker & AWS
- Created documentation for internal use and hands-on onboarding materials for new joiners depicting the life cycle of a project

ARBUNIZE — Mumbai (Remote), India

Machine Learning and Backend Developer Intern — **Feb 2021 - June 2021**

- Developed a Machine Learning algorithm for splitting text content scripts into scenes using keyword extraction
- Added the functionality and created & maintained RESTful Django APIs for splitting text scripts and editing videos like split (based on silences), trim, fast forward, remove audio, remove silences, etc using ffmpeg.
- Designed a log file functionality that keeps all the metadata information for the scene splits
- Worked on the Big Blue Button(BBB) technology and moviepy library to create a recording of a live meeting and save it in a custom video layout set by the user

UNESCO CHAIR, INSTITUTE OF TECHNOLOGY, TRALEE IRELAND — Mumbai (Remote), India

Data Scientist (Freelance) — **May 2020 - July 2020**

- Obtained data through Web Scraping using Selenium, Scrapy, and BeautifulSoup from multinational banks' websites
- Maintained and preprocessed the data to remove anomalies, treat outliers, etc for further analysis using Python
- Performed Statistical, Contextual (using TFIDF, IDF & Glove), and Sentiment analysis (using AFINN, Vader) through Natural Language Processing to see how Multinational Banks are supporting the Sports for development sector
- Created interesting visualizations on the processed data like Wordclouds, Pie Charts, etc. using Seaborn and Matplotlib libraries

KUBIXSQUARE — Mumbai (Remote), India

Machine Learning Intern — **May 2020 - July 2020**

- Designed a Bitcoin price prediction model using Deep Learning techniques such as LSTM, RNN, etc, and statistical modeling techniques like ARIMA
- Performed sentiment analysis on Bitcoin news articles using unsupervised Sentiment analysis techniques such as Vader, Textblob, AFINN, etc., and incorporated the same into the Bitcoin deep learning model

CAPSTONE PROJECT

ADVANCED RECOMMENDATION SYSTEM USING SENTIMENT ANALYSIS - ML, WEB Mumbai, India

Undergrad Final Year Project **Aug 2020 - May 2021**

- Developed an Advanced product recommendation system using Machine Learning clustering techniques and NLP
- Processed customer reviews using NLP, generated sentiments of reviews using Vader, trained an ML model to recommend products, and finally used Flask to provide a web application for the same and achieved a precision of 85.75% on the model
- Wrote a research paper based on the project which is available here: https://easychair.org/publications/preprint/LHFb

PROJECTS

CHAT APPLICATION - JAVA **Sept 2018 - Nov 2018**

- A full-fledged "Multithreaded group-chat messenger" in Java with multiple clients connected to the server (using xampp)

CAMPUS LIVE - WEB (HTML, CSS, JAVASCRIPT, AJAX, PHP) **Oct 2019 - Dec 2019**

- A website with user and event registration that provides students an opportunity to register for inter and intra-campus events, workshops, and seminars and helps the organizers to create and promote their events.

HANDWRITTEN DIGIT RECOGNITION - DEEP LEARNING **Jan 2020 - Mar 2020**

- An ML application made using python language for recognizing handwritten digits using CNN by using the MNIST dataset

NEURAL STYLE TRANSFER - DEEP LEARNING **Apr 2020 - June 2020**

- Performing neural style transfer of an artistic image to a regular image using transfer learning by using the VGG-19 model

SENTIMENT CLASSIFIER - DEEP LEARNING **Aug 2020 - Oct 2020**

- A project to implement sentiment analysis using the IMDb review dataset with the help of TensorFlow Keras library and Recurrent Neural Network (RNN) and Long Short Term Memory (LSTM)

IMAGE RECOGNITION AND VERIFICATION - DEEP LEARNING **Feb 2021 - Apr 2021**

- Created a project to implement face recognition and verification using Convolutional Neural Network (CNN)

TECHNICAL SKILLS

- *PROGRAMMING:* R, Python, SQL, C, C++, Java, HTML5, CSS3, Javascript
- *DATABASE SYSTEMS:* MySQL, PostgreSQL, Oracle
- *SKILLS:* Android Development, Web Development, Data Structures & Algorithms, Machine Learning, AI
- *TECHNOLOGIES:* Django, Docker, Flask, Jupyter Notebook, Excel, Powerpoint, Eclipse IDE, Android Studio, PyCharm, Microsoft Visual Studio, Anaconda

EXTRA CURRICULAR ACTIVITIES

CERTIFICATION COURSES

- Deep Learning Specialization – deeplearning.ai, Coursera
- Tensorflow in Practice Specialization – deeplearning.ai, Coursera
- Data Visualization with python – Cognitive Class
- Sentiment Analysis with Deep Learning using BERT – Coursera
- Accelerating Deep Learning with GPU – Cognitive Class
- Data Analysis with python – Cognitive Class
- Bootstrap and PHP Blog Tutorial – BitDegree
- HTML CSS web development – BitDegree
- Problem Solving using C – NPTEL
- Learn C++ programming from scratch – Udemy

AWARDS AND PARTICIPATIONS

- Winner of the Coding competition held at St. Francis Institute of Technology (SFIT) for IT Colloquium, 2019
- Technical Executive at Information Technology Students' Association (ITSA) in SFIT: 2018 - 2019
- Participated in Technical & Business Event (Pragati 2019 and 2020) held at SFIT with topics such as Smart Helmet (IOT project for multimedia helmet) & Campus Live (intercampus website for event and job registration) respectively
- Participated in Thadomal Shahani Engineering College (TSEC) hackathons in 2019 and 2020 with topics such as Fire Buzzer (web app for prevention and mitigation of fire hazards) and Shopify (an e-commerce website with an advanced recommendation system using NLP of customer reviews and ML) respectively
- Participated in Smart India Hackathon (SIH) 2020 with the topic of Crime chatbot (an AI-powered chatbot for quick crime registration and processing)