

Soumyabroto Banerjee



Data Analyst



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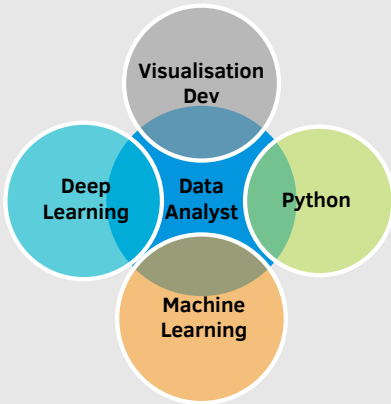
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SOUMYABROTOBANERJEE

Technical Skills

Overview



Programming

0 LOC —————> 5000 LOC

• Python

• Computer Vision • NLP

• Qlik Sense • Tableau • Power BI

Education

B. Tech, Electronics and Communication (GPA: 9.12)

IRPEL, University of Calcutta
2016 - 2020 | Kolkata, India

Achievements:

- TATA Millennium Scholar - WBJEE Rank 1684
- STEX 2018, Runner's up (Tech Fest, IEEE)
- IEEE EDS Member - Organised Seminars and Events

Experience

Aug 2020 - Present **Systems Engineer, TCS Digital**

TCS

- **Qlik Sense Visualization Lead** on the client billable side. Involves Identifying Best Fit Business Visualization Requirements and Developing them on Qlik Sense with a story to support the Business Questions. Involves Developing **Javascript** based **Extensions** and Themes for a better user experience. Using **Agile** methodologies and Effective **DevOps** Model for best and optimized Development and Delivery.
- **Augmented Chat Bot Developer** - NLP Based Chatbot built from scratch in **Python and JS**, it can connect to various platforms like Qlik, Tableau, Power BI and pull your visualizations. It can analyse and develop stories for your data on the fly through its own algorithms. **Microservices** based architecture which is completely **modularized** and built on **Open Source Softwares**. It can connect to DWHs and DBs to pull data and analyses.
- **CoE, Data Science** - Active Member and Data Scientist at Centre of Excellence - Data Science. Worked on multiple POCs to identify and mitigate Client Pain Areas through the magic and language of data. POC include - Covid MRI Segmentation, Future News Prediction (current)

May 2020 - Aug 2020 **Deep Learning Freelancer**

aQb Solutions

- **Big 5 Video Analyzer** - First Impression (ChLearn et. al.) to analyze a Video undersampled by 0.30 to produce the overall Big 5 Traits of a Subject in Question. Trained and Tested for an accuracy of 0.98 on CNN Based Network.
- **NLP Based MBTI and Big 5** - Developed 14 NLP Models - based on Naive Bayes, LSTM Based, RF and Decision Tree based. MBTI classes were trained in an OVO manner. The MBTI based LSTM Network outperformed other models and it incorporated all the classes as well. For Big 5, we trained a simple Naive Bayes and also a sequential model to add to the Video Analyzer. Checked for correlation between the two domains - MBTI and Big 5. Overall Accuracy above 0.88.
- **QnA Chatbot** - Chatbot based on Image Captioning, CLIP, GPT 2 and Elastic Search, it can understand a Question a student wants to ask just from an image and/ or extract texts around that image. Works on a feedback loop to confirm the context of questions and uses a robust fuzzy based Elastic Search to search contextual answers from a connected database.

Apr 2020 - Jul 2020 **Deep Learning Freelancer**

Adben Industries Pvt. Ltd.

- **FaceNet based Face Recognition System** to Register and track faces in real time.
- **Anti-Spoofing Engine** to detect whether Person in front of camera is a real person or an image.
- **Mask Detection Model** to detect masks and log into database if and when there are defaulters.
- **Mask Based Face Recognition** - This was the major challenge where the person doesn't need to open his mask for face detection to work. It Works by Facial Feature Extraction and Training.
- **Cloud Based SaaS** - Coded from Scratch bypassing Streaming Software and deployed on GCP and AWS as a SaaS Model for Customers.

Aug - 2019

- **Prediction of high delay cash to invoice flow.** Identification of High Delay Zone Customers.
- **Base Model** was adopted as **SARIMAX** to build on top of it.
- Built end to end **Machine Learning** Pipeline with **Bagging and Boosting** for Final prediction.
- **Imbalance** was tackled using **sampling** techniques
- **LSTM** based model used to process the time dependency.
- **Worked on Market-Basket-Analysis** for future Order prediction for Tata Pravesh.

Research

2019 - 2020 **B.tech Candidate, Research Student**

University of Calcutta

Thesis: CNN based Multimodal Brain Tumour Detection

- Using **SWT** and **PCA** to merge and blend MRI and SPECT Images to extract maximum information from both worlds.
- **CNN for automatic feature extraction** and using visualization of CNN firing patterns to determine the features learnt on classification.
- Received Great Appreciation and 1st Best Paper Award in AMPHE, 2020.
- Proceeds to be published on Springer Nature Journal in July 2021.
- **Tools:** Python, numpy, Tensorflow, scikit-learn, pandas

2019 - 2020 **Research Intern**

Jadvpur University

Thesis: Novel Clustering Algorithm

- Converting of weak hard-cluster based algorithms to fuzzy algorithms using a probabilistic model
- Moving of cluster points in a defined cluster space for outlier removal and better clustering shape index
- Proceeds yet to be published
- **Tools:** Python, numpy, scikit-learn, pandas

About

Why Me ? I stick to problems till they get solved and I am never disappointed if they don't because I learn a lot if they don't as I know the dark lanes the next time I face a similar challenge.

Data and its Science has always been like Chemistry to me. It is mysterious, yet so fascinating that you cant but just enjoy it.

I look for challenges in my everyday work and newer challenges keep me motivated. I am an obsessive person who seeks the best out of everything, constantly learning in the process. If I finish something, I deliver it, but in my free time go back to it and check for better, viable options. I love Multi Tasking and working on multiple tasks feels like I can utilize most part of my skill set.

Data is something that motivates me because data gives one the power to actually dissociate lies from the truth. It gives a sense of oneness to solve problems that are otherwise not so easy to solve.

I have been an active learner and an active follower of everything data. I love to work on data and let data do more of the work through Python Codes.

I am an extremely positive person with a never ending thirst for knowledge. I also do have excellent oratory skills, do let know if we are up for a debate.