

Sushovan Mandal, B. Tech, Computer Science & Engineering, IIT Kharagpur

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Passionate developer, budding Data Scientist, ideator and cosmophile. More than 1 year experience solving industry problems using Machine Learning and Data Analysis. Expert in efficient Python Data Science coding using pandas, NumPy, scikit-learn. Advanced user of Git versioning system to comfortably handle large, complex codebase. Fluent in English, Hindi, Bengali.

Experience

Alumnus Software Ltd., Kolkata – Engineer, Data Science Team

APR 2018 – PRESENT

- ❖ Coordinated with Lead Data Scientist; feature engineering, conceptualization of different machine learning models, results analysis and visualizations across several client projects.
- ❖ Achieved 70% accuracy in projections for how different promotion schemes affect B2B sales of different biscuit brands and sub-brands to retailers and wholesalers in a couple of markets.
- ❖ Improved upon existing methods, predictions for Short Interest of US stocks on given data after analysing and evaluating many machine learning models as a team.
- ❖ Reduced runtime of codebase for data pre-processing and machine learning modelling over full dataset, by order of magnitude using optimized NumPy, pandas, python coding and parallelism.
- ❖ Streamlined reusability across projects by building a modular, optimized code flow framework for sliding window timeseries modelling, independent of machine learning technique utilised.
- ❖ Reduced inefficiency by 5% in FMCG stock loading using Azure Databricks as a platform to run models.
- ❖ Utilised ML techniques like SARIMAX, Multi-Linear Regression, Random Forest, XGBoost, Clustering, etc.

Alumnus Software Ltd., Kolkata – Trainee Engineer

OCT 2017 – APR 2018

- ❖ Designed and developed prototype Chatbot project for a professional scenario with distress detection in a small team; architecture consisted of Android app, Python Django Server and Google Dialogflow NLP agent.
 - Developed algorithm for stress incident detection using multiple inputs.
 - Trained a comprehensive Dialogflow bot with custom user intents leveraging case-specific data.

Microsoft India Development Centre, Hyderabad – Machine Learning Intern, Bing.com team

MAY 2016 - JULY 2016

- ❖ Automated Feature Engineering for existing Debugging tool for location query results.
- ❖ Built Big Data tool mining search logs to determine most important locations using Machine Learning.

National Digital Library, IIT Kharagpur - Project Student, B. Tech Project

FEBRUARY 2015 - NOVEMBER 2016

- ❖ Engineered web portal prototype, with active feedback from supervisor, for searching and accessing yesteryear Question Papers of Board Exams and Entrance Examinations, single-handedly.
 - Used Django Frameworks and MariaDB database backend and REST API.
- ❖ Automated metadata creation for indexing new educative content files in a Digital Library using Python Information Retrieval program making use of Open-source Python libraries like lxml, ebooklib.

SAP Labs India, Bangalore - Intern

MAY 2013 - JULY 2013

- ❖ Integrated Proprietary C# tool with 3rd party suite in Testing Automation in a 2-member team.
- ❖ Experimented on prototype Android application for testing mobile apps as a Proof of Concept.

Autonomous Ground Vehicle Research Group, IIT Kharagpur - Junior Developer

AUGUST 2011 - MARCH 2013

- ❖ Acquainted with techniques like A* search, Simultaneous Location and Mapping (SLAM), Reinforcement learning and Imitation Learning on 3D point cloud from LIDAR, stereoscopic vision under Team [AGV](#).
- ❖ Contributed to SONAR and GPS sensor modules for path planning and obstacle avoidance using Kalman Filter for bot prototypes which won a few awards at IGVC '12 & '13, Michigan, USA, and also Autonomous Rover prototype chassis for Team Indus, Google Lunar Xprize finalist.

Skills and Expertise

Python, C, C++ 11, Kotlin, Java, SQL; Linux environment & terminal; Advanced version control: git, Github.
Python libraries: NumPy, pandas, scikit-learn, Django; Python visualization: Matplotlib, seaborn, Plotly.
Development Environments: Jupyter, PyCharm, Android Studio; Advanced code editors: Atom, Sublime.

Education

Bachelor of Technology - Computer Science & Engineering, IIT Kharagpur

Class of 2017, CGPA: **7.0**

- ❖ Used Hadoop Streaming utility to extract and analyze meaningful information from large website and sales logs, with Python mapper and reducer scripts to run Map-Reduce on a Hadoop cluster.

AISSCE 2010, CBSE 10+2 - DAV Model School, Durgapur

All India Senior School Certificate Examination, Science with Computer Science: **89%**

AISSCE 2008, CBSE 10 – DAV Public School, Midnapore

All India Senior School Examination: **88.4%**

Competition

Robocop, Robotix '11 - Kshitij'11. Techno-Management fest of IIT Kharagpur

- ❖ Won **Best Freshers' Award** with 3-member team in Robotics Event implementing **Image Processing**.
- ❖ Used **OpenCV** libraries in VC++ Project, run on a laptop driving Differential Drive of the bot.

Extra-Curricular Activities

- ❖ Awarded one of the Best Volunteers in NSS as Deputy Group Leader
- ❖ Outdoor group activities like road trips, mountain trekking
- ❖ Sketching