

# Sushovan Mandal, Machine Learning Engineer, IITian

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Passionate Machine Learning Engineer and ideator. More than one year experience solving industry problems using Machine Learning, Data analysis & innovative visualizations. Expert in efficient Python Data Science coding using pandas, NumPy, scikit-learn. Advanced user of Git versioning system, able to comfortably handle large, complex codebase. Fluent in English, Hindi, Bengali.

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## Experience

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

APR 2018 – PRESENT | 1 year 2 months

- ❖ 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 | 6 months

- ❖ 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 | 3 months

- ❖ 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

JULY 2015 – NOVEMBER 2016 | 1 year 4 months

- ❖ 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 | 3 months

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

**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

**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%****Extra-Curricular Activities**

- ❖ Won Best Freshers' Award in a 3-member team for building a Differential Drive bot; in an Image Processing event Robocop, utilizing OpenCV libraries, at Kshitij'11, IIT Kharagpur.
- ❖ Contributed as Junior Developer in a student-body research group Autonomous Ground Vehicle at IIT KGP, building autonomous rover prototypes which won a few awards at IGVC '12 & '13, Michigan, USA.
- ❖ Awarded one of the Best Volunteers in NSS as Deputy Group Leader.
- ❖ Hobbies include sketching, road trips, mountain trekking.