

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

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Passionate **developer, ideator and technologist** with an eye for aesthetics. Eager to **learn and improve**. Would love to work on **Machine Learning** projects. Experienced in **C, C++, Python**, Web application framework **Django**. Cryptocurrency, Defence and Space Technology hobbyist. Fluent in English, Hindi, Bengali.

Experience

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

APR 2018 – PRESENT

- ❖ Analyzed for a client, the effectiveness of different schemes on B2B sales of different biscuits to retailers and wholesalers. Also projected successfully would be effect of scheme changes on sales using random forest.
- ❖ Attained better prediction, compared to existing methods, of Short Interest for US stocks after evaluating several machine learning techniques (name them), finally selecting ensembles multi-linear regression which was performing best overall.

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Alumnus Software Ltd., Kolkata – Trainee Engineer

OCT 2017 – APR 2018

- ❖ Designed and developed prototype chatbot Android app for a professional scenario with distress detection in a team of two. Workflow architecture consisted of Android Client app, Python Django Central Server and Google Dialogflow service. Developed the algorithm to detect stress incident from Audio byte stream data. Designed a comprehensive Dialogflow agent with custom detailed intents and entities with lots of 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 past search logs to **Machine Learn** the most important locations.

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

FEBRUARY 2015 - NOVEMBER 2016

- ❖ **Engineered** upcoming sister 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.
 - Accessed DSpace content repository using **REST** API for content and search results.
- ❖ **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

Team [AGV](#) is a **multidisciplinary research & development group** in the field of **Robotics & Artificial Intelligence** aimed at building a fully operational self-driving car.

- ❖ Acquainted with techniques like A* search, Simultaneous Location and Mapping (SLAM), Reinforcement learning and Imitation Learning on 3D point cloud from LIDAR, stereoscopic vision.
- ❖ 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.

E-learning Portal thelearningpoint.net, **work from home** - Freelancer

JUNE 2012 - JULY 2012

- ❖ **Designed and developed** visual simulations of mechanics topics including Simple Harmonic Motion using Processing libraries and IDE, **proportional to real-time motion characteristics**, which are being used for e-learning purposes.

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.
- ❖ Built prototype Online Course System website using **Django** and **MariaDB**.
- ❖ Used **C++ 11** for **Computer Graphics** and **C** for **Operating System** Projects.

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.

Skills and Expertise

Python, C, C++ 11, SQL, Kotlin, Java; Linux environment & terminal; Version control: git, Github.

Python tools: NumPy, Pandas, Sklearn, Django framework; Python visualization: Matplotlib, Seaborn, Plotly.

Integrated Development Environments: PyCharm, Android Studio; Advanced code editors: Atom, Sublime.

Relevant Subjects Taken

Machine Learning, Artificial Intelligence, Information retrieval, Database Management Systems, Computer Graphics, Social Computing, Operating systems, Software Engineering, Algorithms, Data Structures, git and github.

Management of Growth Ventures, Introduction to Nanoscience & Technology, Linear Algebra, Probability and Statistics, Computer Application in Aerospace Engineering.

Extra-Curricular Activities

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