

Sushovan Mandal, B.Tech student, Computer Sc. & Engg., IIT Kharagpur

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Passionate **developer and technologist** with an eye for aesthetics. Eager to **learn and improve**. Would love to work in **Machine Learning** projects. Experienced in **Python** based web application framework **Django**. Have hobby in Cryptocurrency. Fluent in English, Hindi, Bengali.

Education

Machine Learning Nanodegree - udacity.com

FEBRUARY 2016 - expected FEBRUARY 2017

- ❖ Implemented Supervised Classification using Naive Bayes and Support Vector Machines (SVMs) using scikit-Learn (sklearn) Library in Python.

Bachelor of Technology - Computer Science & Engineering, IIT Kharagpur

Expected DECEMBER 2016

- ❖ Used **Hadoop Streaming** utility to extract and analyze **meaningful information** from large website and sales logs, with **Python mapper and reducer** scripts to run **MapReduce** 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%.

AISSE 2008, CBSE 10 - DAV Public School, Midnapore

All India Senior School Examination, Board - 88.4%.

Experience

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** prototype for upcoming sister web portal, with active feedback from mentor, 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 the Digital Library using **Python Information Retrieval** program making use of **Open-source** Python modules like lxml, ebooklib.
- ❖ Achieved **automation** of conversion of a large batch of metadata from one format to another.

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 **multidisciplinary research & development group** in the field of **Robotics & Artificial Intelligence** aimed at building fully operational self-driving car.

- ❖ Acquainted with various techniques 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 in the bot, Eklavya, team's entry to IGVC '12 & '13, Michigan, USA. Collaborated on **simulation** for Lunar 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.

Additional Projects**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

Python, C, C++ 11, SQL, Java; Linux environment & terminal; version control:-git, github;

Django Frameworks, Hadoop MapReduce, sklearn and other open-source Python modules;

Integrated Development Environments:- **Eclipse, IntelliJ IDEA & derivatives, Microsoft Visual Studio;** advanced code editors:- **Sublime, Atom.**

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