# 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.

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## Education

**Machine Learning Nanodegree** - udacity.com
FEBRUARY 2016 - expected AUGUST 2016

- ❖ 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

**National Digital Library, IIT Kharagpur** - Project Student, B.Tech Project
FEBRUARY 2015 - DECEMBER 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.
- ❖ **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

Interned at **Testing Automation** Department in collaboration with batchmate, with Proprietary software.

- ❖ Integrated SAP tool with third-party software suite using **C# prototype Windows application**.
- ❖ 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 Version 1 of bot, Eklavya, team's entry to IGVC '12, Michigan, USA.
- ❖ Collaborated on **simulating motion dynamics** using Gazebo Robotics simulator and Robot Operating System (ROS) for Version 2 of bot participating in IGVC '13 and 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

Information retrieval, Database Management Systems, Computer Graphics, Social Computing, Operating systems, Software Engineering, Algorithms, Data Structures, Automata Theory, 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
- ❖ Cryptocurrencies