

## 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.

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### 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 Library in Python.

#### **Bachelor of Technology** - Computer Science & Engineering, IIT Kharagpur

Done on DECEMBER 2016, 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%**

### 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** 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**.
- ❖ 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 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.

**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](http://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.

**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**

**C, Python, C++ 11, SQL, C#; Linux environment & terminal; Version control: git, Github;**

**Django Frameworks, Open-source Python modules Hadoop Map-Reduce, sklearn;**

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