Sushovan Mandal

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EXPERIENCE

SAP Labs India, Bangalore — *Intern*

MAY 2013 - JULY 2013

Developed **Prototype mobile & desktop application** in **Testing Automation** on **Proprietary** software technologies, in a **2 member team**.

thelearningpoint.net, work-from-home — *Freelancer*

JUNE 2012 - JULY 2012

Designed and developed **Java interactive visualizations** (applets using **Processing libraries** and environment) for **e-learning** purposes.

- ❖ Created the visual **simulations proportional to real-time motion characteristics** for a few basic mechanics topics including those for the Simple Harmonic Motion.

Autonomous Ground Vehicle, IIT Kharagpur — *Junior Developer*

AUGUST 2011 - MARCH 2013

- ❖ worked as a part of an **inter-disciplinary research & development team** in the field of **Robotics & Artificial Intelligence** (it is **now** Auro Robotics).
- ❖ worked towards implementation of various **AI** search techniques, **S.L.A.M.** world-view of the vehicle, and other metrics vis-a-vis an autonomous ground vehicle.
- ❖ worked on **AVR programming** for **SONAR and other sensor** suites using a **VC++ (Visual Studio)** program for **path-planning and obstacle-avoidance** for the team's entry, **Eklavya v1.0**, to **IGVC 2012** held in Michigan, USA.
- ❖ implemented **socket programming** and **Gazebo 3D** environment simulator in **a) Eklavya v2.0** for participating in **IGVC 2013** and **b) Lunar Autonomous Rover** prototype for **Team Indus.**

Intaglio' 12, IIM Calcutta — *Intern*

Worked in a **2 member team** to build an **online Business Simulation Game portal** using **HTML, CSS and PHP**.

SKILLS

Python, C, C++ 11 , Java, SQL, Django Frameworks

compilers & interpreters(**gcc/g++, python, linux shell/bash**)

version control(**git, github**)

Integrated Development Environments(**Eclipse, IntelliJ IDEA & derivatives, Microsoft Visual Studio, Netbeans**), advanced editors (**Sublime, Atom**), Microsoft & other Open Source Office Suite

LINUX / UNIX based OS : **Archlinux, Ubuntu** and others

Open-source libraries like **python & perl libraries, OpenCV, ROS**.

LANGUAGES

English, Hindi, Bengali

EDUCATION

IIT Kharagpur, W.B. — *B.Tech*

JULY 2010 - DECEMBER 2016

Undergraduate Student of **Computer Science & Engineering** Department.
CGPA - 6.7 (till last semester)

D.A.V. Model School, Durgapur — *10+2*

MAY 2008 - MARCH 2010

CBSE, All India Senior School Certificate Examination (**Science with Computer Science**) - 89%.

D.A.V. Model School, Durgapur — *till std 10*

MAY 1998 - MARCH 2008

CBSE, All India Senior School Examination - 88.4% (Board).

PROJECTS

B.Tech Project — *IIT Kharagpur, ongoing*

Created **Python** programs for work related to **National Digital Library**, IIT Kharagpur, by MHRD, India:

- ❖ Script to **automate conversion** of a large **batch of metadata** from **MARC 21** to **SIP format**.
- ❖ Program to **retrieve metadata automatically** from **educative content** files like ebooks, articles, etc.

Academic Projects — *IIT Kharagpur*

- ❖ Built a **prototype** of a **Online Course System** website using **Django** and **MariaDB**.
- ❖ Used **Hadoop** and **MapReduce** to **extract statistics** about user behaviour from an online discussion forum data.
- ❖ Used **C++ 11** for **Computer Graphics** Projects.

Robocop, Robotix' 11 — *Kshitij' 11, the Techno-management Fest of IIT Kharagpur*

- ❖ Worked in a **3 member team** *winning 'Best Freshers' Award'* in Image Processing 'Robocop'.
- ❖ **Image Processing** was done in a **VC++ Visual Studio** project using **OpenCV** libraries.
- ❖ Built a robot powered by a laptop, serially connected (**UART**) to an **Atmega32** microprocessor controlling a motor-driver circuit implementing a **differential drive**.

Extra-Curricular ACTIVITIES

Volunteered at **NSS** in the capacity of **Deputy Group Leader.**

>> **Lead a team** of volunteers in the **renovation** work of a **village school**.

>> **Awarded** for being one of the **best volunteers**

Participated in IIT Kharagpur's Inter Hall Activities such as

>> Technical events: **Opensoft, Product Design, Hardware Modelling, Ad Design**

>> Social & Cultural events: **Sketching, Hindi/Bengali Dramatics**

Participated in outdoor group activities like **road trips, mountain trekking**

Volunteered in Shaurya' 10, IIT Kharagpur's Sports Fest