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 **team** of 2.

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 2011

- ❖ worked as a part of an **inter-disciplinary research & development team** in the field of **Robotics & Artificial Intelligence** (it is **now** Auro Robotics).
- ❖ learned about 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 **SONAR and other sensor** suites with Atmega16 microprocessor (**AVR programming**) and **UART** serial communication to the main computer, for the **perception** of the environment by the robot, using a **VC++** program in **Visual Studio** 2010 for **path-planning and obstacle-avoidance**. This module was used in a robot named **Eklavya 1.0**, the team's entry to **IGVC 2012** held in Michigan, USA.
- ❖ Worked on implementation of **socket programming** and **Gazebo 3D** environment simulator in a robot named **Eklavya 2.0** (for participating in **IGVC 2013**) and **Lunar Autonomous Rover** prototype for **Team Indus** (Finalist from India to **Google Lunar X** space competition).

SKILLS

Python, C, C++ (std'11) , Java, SQL, HTML, CSS

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

version control(**git, github**), **Django**

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

Extra-Curricular ACTIVITIES

- ❖ Volunteered at **NSS** at the capacity of **Deputy Group Leader**
  - ➢ **Lead a team** of volunteers

EDUCATION

IIT Kharagpur, W.B. — *B.Tech*

JULY 2010 - DECEMBER 2016

Undergraduate Student of **Computer Science & Engineering** Department

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**.
- ❖ Python program to **retrieve metadata automatically** from **educative content** files (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.

Intaglio' 12 — *Annual Business School Summit, IIM Calcutta*

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

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 using **OpenCV** libraries in a VC++ project in **Visual Studio** 2008, with a laptop powering the robot, serially connected (**UART**) to an **Atmega32** microprocessor controlling a motor–driver circuit implementing a **differential drive**.

in the **renovation** work of a **village school**
- ➢ **Awarded** for being one of the **best volunteers**
- ❖ Active in IIT Kharagpur's Inter Hall Activities such as :
  - ➢ Technical events: **Opensoft, Product Design, Hardware Modelling, Ad Design**
  - ➢ Social & Cultural events: **Choreography, Hindi/Bengali Dramatics**
- ❖ Outdoor group activities like **road trips, mountain trekking**
- ❖ Volunteered in Shaurya'10, IIT Kharagpur's Sports Fest