



EDUCATION

Year	Degree/Exam	Institute	CGPA/Marks
2017	B.TECH	IIT Kharagpur	8.04 / 10
2013	12th CBSE	Bodhichariya Senior Secondary School	91.8%
2011	10th ICSE	St. Agnes Convent School	94%

INTERSHIPS

Samsung Research and Development, Bangalore

- Harmonised the discovery and the connection procedures of **Wi-Fi Direct** with that of Wi-Fi. Modified the kernel code of the supplicant to broadcast and accept probe requests from all devices in a Wi-Fi network, increasing data transfer speed and decreasing power consumption.
- Received **Pre-Placement Offer** from Samsung R&D.

Nanyang Technological University, Singapore

- Developed and implemented a **route choice model** to compute the probability of a driver to choose paths based on attributes including travel time, number of signals encountered enroute, length of the path.
- The choice set was generated using a modified form of **BFS - Link Elimination** and **Path Size Logit Model** was used to give the best possible path.

PROJECTS

Deep User Modelling - Bachelor's Project

- Developing an end-to-end deep learning based user-model for **scientific paper recommendation**.
- The user model is utilised by a scientific paper recommendation system and the results are being ranked on the basis of semantic match with the existing papers of the user along with temporal and spatial (with respect to citation network) discounting.

Comment Analysis - Complex Networks

- Built a model using **Latent Dirichlet Allocation** and similarity measure which could identify the exact points of drift in comments on a particular news article.
- Topics of the news article were found and then mapped to comments and users to analyse the drift points.

Identification of code switching points in tweets - Natural Language Processing

- Analysed tweets for identifying code switching points by checking for language change followed by using deterministic and probabilistic models to validate the switch.
- Obtained accuracy of **~80%**.

Web Development

- Built an **Online Course Management** website which had provisions for students to take different courses, teachers to post notes, assignments and quizzes and even assess them.
- Built an online **Airplane Management System** (AMS) which included both the administration and the customer interface.
- Developed the entire front end of **www.robotix.in**

Robotics

Built multiple robots which could follow humans, traverse a grid, detect metal and be controlled using hand gestures using sensors like accelerometer, flex sensor and IR transmitter-receiver.

AWARDS AND ACHIEVEMENTS

The sole recipient of the prestigious **Aditya Birla Scholarship** from the incoming batch of IIT Kharagpur students in 2013

Secured an **All India Rank of 316** in the IIT JEE 2013

Obtained a percentile of **99.89** in JEE Mains 2013

Ranked in **top 1%** in Rajasthan in **National Standard Examination for Chemistry** organised by Homi Bhabha Research Centre in 2012

SKILLS AND EXPERTISE

Computer Languages - C, C++, Python. Familiar - JAVA.

Web Development - HTML5, CSS, PHP, MySQL, MongoDB, JavaScript, Angular JavaScript.

Libraries and Tools - Visual Studio, Eclipse, NLTK, Arduino, AVR Studio, SolidWorks, SketchUp, ROS, Gazebo, LATEX.

COURSEWORK INFORMATION

Relevant Courses: Algorithms I and II, Software Engineering, Natural Language Processing, Compilers, Operating Systems, Computer Networks, Complex Networks, Database Management Systems, Probability and Statistics, Matrix Algebra.

Ongoing Courses: Machine Learning, Artificial Intelligence, Image Processing, Theory Of Computation, Advanced Graph Theory.

POSITIONS OF RESPONSIBILITY

Head, Technology Robotix Society

- Head of a 3 -tier organising team of **Robotix**, the largest robotics fest in Asia held during Kshitij which caters to over **2000 participants**.
- Designed and formulated the **autonomous robotics events** of Robotix 2015 and 2016
- Designed a detailed curriculum for a robotics course on mechanical, electronics and computer vision for the first years of IIT Kharagpur called **KRAIG (Kharagpur Robotics and AI Group)**. Prepared numerous tutorials on PID control, AVR and autonomous robotics.
- Conducted **autonomous workshops** in places like Kolkata, Ranchi and Jaipur to spread the culture of robotics.