

IIT Kharagpur

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**ASHISH H MANMODE**

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**ACADEMIC QUALIFICATIONS**

**Indian Institute of Technology, Kharagpur** Kharagpur, West Bengal

*Electronics and Electrical Communication Engineering (B.Tech+M.Tech)* *2012-2017(Expected)*

CGPA: 8.01

**Jawahar Navodaya Vidyalaya** Wardha, Maharashtra

*Higher Secondary – CBSE AISSCE* *2011*

Score: 94.4 %

**Jawahar Navodaya Vidyalaya** Wardha, Maharashtra

*Secondary – CBSE AISSE*  *2009*

Score: 90.4 %

**SCHOLASTIC ACHIEVEMENTS**

* Cleared **Joint Entrance Examination** conducted by Indian Institute of Technology with 99.16 percentile. *(2012)*
* Solely designed and Exhibited a mathematics project named ‘COMPLEX GEO\_TRIGONOMETER’ at several stages followed by prestigious **Jawaharlal Nehru National Science Exhibition for Children, Jaipur** and finally at **98th Indian Science Congress, Chennai**. *(2011)*
* **Regional Topper** in Class XII Board (CBSE) from Pune Region. *(2011)*
* Among top 400 students who qualified for **Indian National Mathematics Olympiad – 2010**. *(2010)*
* Awarded Meritorious Scholarship in Maharashtra Talent Search Examination, 2009.  *(2009)*
* Among top 10% scorers in **XL National Mathematics Talent Competition 2008** conducted by ‘The Association of Mathematics Teachers of India’. *(2008)*
* Ranked 1261 at Round 1 of **Facebook Hacker Cup 2015**. *(2015)*

**WORK EXPERIENCE**

**Gray Routes Innovative Distributions, Mumbai** *(May 2015 – July 2015)*

* Summer Intern – Product Analyst
* Worked on Google BigQuery, Query Optimization and added backend functionalities to the existing application.
* Functionalities included using google maps API and the direction service for planning optimized journey via some outlets to the destination with option for manually prioritizing some outlets.

**PROJECTS**

**Interactive Construction of 3D Models from Panoramic Mosaics** *(May 2014 – present)*

* Summer Project under Prof. P. K. Biswas , IIT Kharagpur
* The System uses a set of images taken from a same view point and their transformation matrices as input.
* It recovers the camera pose for each mosaic from known line directions and points, and then constructs a 3D model using all available geometrical constraints. The problem is formulated as a least square problem by partitioning the constraints as hard and soft, which can be solved using QR factorization.

**Lane Follower Bot** *(Dec 2013)*

* Project at Robotix workshop, TSG, IIT Kharagpur
* The bot used a camera feed as input and with an Arduino board the feed is processed using computer vision algorithm to guide the bot through the lane.

**Complex Geo-Trigonometer** *(May – Sept 2010)*

* College level project under Mr. Kawade, JNV Wardha.
* A college level project which implements many mathematical concepts of former level in a practical way. It gives a best tool to find trigonometric function values of all possible angles and also the inverse of all invertible functions.
* The Project received appreciation at National level as well as it was personally appreciated by Dr. Thomas Steitz (Nobel laureate Chemistry).

**TECHNICAL SKILLS**

* Programming languages C, C++, PHP, Javascript, Python ( Basics )
* Libraries and API’s OpenCV, Google Maps, DirectX (Basics )
* Software frameworks Visual Studio, MatLab, SolidWorks, Adobe PhotoShop
* DBMS SQL, Google BigQuery

**RELEVANT COURSES UNDERTAKEN/ONGOING**

* Programming and Data Structure\*
* Machine Intelligence and Expert Systems
* Microcontrollers and Embedded Systems\*
* Matrix Algebra
* Probability and Stochastic Processes
* Signals and Systems
* Digital Electronic Circuits\* #courses on coursera

\*courses with lab component

* Digital Image Processing
* Speech and Natural Language Processing
* Digital Signal Processing\*
* Digital Communications\*
* Control Systems Engineering
* Mathematics I & II
* Algorithms I & II#

**SPORT PROGRAMMING**

* Codechef : Highest Rank 282 *(world)*
* Codeforces : Highest Rating 1641

**POSITION OF RESPONCIBILITY AND EXTRA CURICCULAR ACTIVITIES**

* Part of Silver winning Case Study Event, Technology Students Gymkhana, IIT Kharagpur.*(Mar 2014)*
* **Subhead,** **National Students Space Challenge’13 (nssc.in)**  *(Sept 2013)* Involved coordinating a team of 24 peoples in the design team of the first space fest organized by spAts, IIT Kharagpur.
* Member of Gold Winning **Inter-Hall Rangoli** Competition in a team of 5. *(Oct 2013)*
* Awarded **‘C’** and **‘B’** Certificate in National Cadet Corps (1 Bengal EME Coy NCC). *(2012-2013)*
* Member of Bronze Winning **Inter-Hall Illumination** Competition. *(Oct 2012)*
* Playing Team Member Azad Hall Hockey Team, IIT Kharagpur.
* Awarded B grade in Intermediate Grade Drawing Examination conducted by Govt. of Maharashtra.

*(2006)*