IIT Kharagpur
+91 7585 965862
ash.manmode@iitkgp.ac.in
ashishmanmode.me

ASHISH H MANMODE

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

- Ranked 1261 at Round 1 of **Facebook Hacker Cup 2015**. *(2015)*
- 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)*

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 implemented 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.
  - Technologies used: PHP, Javacsript, Google BigQuery, Google Maps.

PROJECTS

Plagiarism detection in programming language source codes using NLP Tree kernel methods
(July 2015 - present)

- Term Project under Prof. Pawan Goyal, Computer Science Department, IIT Kharagpur
  - Heuristics based work (eg. Moss) is found to be ineffective in current scenario for finding copied code. Here using the NLP tree kernel methods which are used for syntax and semantic analysis, the plagiarism detection problem will be solved.

Deep Neural Network based Speech Synthesis *(Bachelor's Training Project)* *(July 2015 – present)*

- Bachelor's Training Project under Prof. Gautam Saha, IIT Kharagpur
  - Traditional TTS systems uses Hidden Markov Model Based approach at speech synthesis. Use of DNN will be tested for speech synthesis in this project.

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

- 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.

Complex Geo-Trigonometer *(May 2010 – 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) at 98th Indian Science Congress, Chennai.

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

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

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)*
- Awarded B grade in Intermediate Grade Drawing Examination conducted by Govt. of Maharashtra. *(2006)*