

# Midhul Varma

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## CONTACT INFORMATION

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B3-122, Kameng Hostel,  
IIT Guwahati, Guwahati,  
Assam, India-781039

## EDUCATION

### Indian Institute of Technology, Guwahati

Bachelors of Technology (B.Tech) in Computer Science and Engineering  
- Expected May 2017  
Present CGPA: 8.96/10  
(3 semesters complete)

### Vidyadham Junior College, Hyderabad

Intermediate Public Examination (Mathematics Physics & Chemistry)  
Board of Intermediate Education, Andhra Pradesh  
- May 2013  
Grade: A

## ACHIEVEMENTS & HONORS

- ☐ Shortlisted for the **Aditya Birla Group Scholarship** 2013 among **27** students from all over India
- ☐ Shortlisted for the prestigious **KVPY Fellowship** 2012, Department of Science & Technology, Govt. of India
- ☐ Secured **All India Rank 821** in JEE (Joint Entrance Examination) Advanced 2013 out of 1,50,000 selected candidates
- ☐ Secured **All India Rank 251** in JEE Mains 2013 out of around 1.4 million candidates
- ☐ Placed in **National top 1%** out of 40,721 candidates in the National Standard Examination in Physics (NSEP)
- ☐ Qualified state level Pre Regional Mathematics Olympiad 2012

## PROJECTS & WORK

### Web Based CAPTCHA Image Recognizer

December 2014

*Independent Work (Partially Complete)*

Attempted to build a web based CAPTCHA image recognizer from scratch. The plan was to remove noise using image filters, segment the characters and recognize them using machine learning techniques. The work is partially complete. [\[More Details\]](#)

### Online Course Feedback System

November 2014

*Course project guided by Dr. Santosh Biswas*

Developed a generic web based course feedback system targeting universities and other educational institutions. The system is fully customizable and features a user friendly administrator panel, intuitive feedback forms and data visualization of the results.

### Autonomous Maze Solving Robot

March 2014

*International Autonomous Robotics Competition (iARC), TechKriti'14, IIT Kanpur*

Built and programmed an autonomous line following robot which is capable of solving arbitrary loop-less mazes and returning to the start point in the shortest possible path. The bot was placed 4th in the international round of the iARC competition held during TechKriti 2014 at IIT Kanpur. [\[More Details\]](#)

## Classroom Voice Amplification System

October 2013

*TechEvince 1.0, IIT Guwahati*

Built a prototype system which enables students sitting at the back of large classrooms or lecture halls interact with the teacher/professor using their smartphones. A script capable of running on Android devices allows students to speak into the microphone of their mobile. This voice is sent to a central system and amplified through speakers on approval of the teacher/professor. [\[More Details\]](#)

## Other ongoing course projects

*To be complete by May 2015*

- ☐ Compiler for a subset of the C language
- ☐ Text editor for Windows based systems
- ☐ 4-bit CPU implementation on breadboard
- ☐ Script for offline website reorganization

### TECHNICAL SKILLS

- |   |                                       |  |
|---|---------------------------------------|--|
| <input type="checkbox"/> Linux (Ubuntu, Fedora) | <input type="checkbox"/> HTML         | <input type="checkbox"/> Shell Scripting |
| <input type="checkbox"/> Microsoft Windows      | <input type="checkbox"/> CSS          | <input type="checkbox"/> numPy & sciPY   |
| <input type="checkbox"/> C/C++                  | <input type="checkbox"/> PHP          | <input type="checkbox"/> Java            |
| <input type="checkbox"/> Python                 | <input type="checkbox"/> Visual Basic | <input type="checkbox"/> Prolog          |
| <input type="checkbox"/> Javascript             | <input type="checkbox"/> LaTeX        | <input type="checkbox"/> Arduino         |

### RELEVANT COURSEWORK

- |   |   |
|---|---|
| <input type="checkbox"/> Linear Algebra         | <input type="checkbox"/> Digital Design                         |
| <input type="checkbox"/> Complex Analysis       | <input type="checkbox"/> Formal Languages & Automata Theory *   |
| <input type="checkbox"/> Multivariable calculus | <input type="checkbox"/> Software Engineering *                 |
| <input type="checkbox"/> Data Structures        | <input type="checkbox"/> Computer Organization & Architecture * |
| <input type="checkbox"/> Algorithms *           | <input type="checkbox"/> Modern Biology                         |
| <input type="checkbox"/> Discrete Mathematics   |   |

(\* - Ongoing courses,  
to be completed by April 2015)

### OTHER ACTIVITIES

- ☐ Undergraduate Teaching Assistant for freshmen year physics course (ongoing)
- ☐ Organizer, Technothon 2014 (International School Championship organized by students of IIT Guwahati)
- ☐ Two times active participant in Kriti (Inter Hostel techno-management competition)
- ☐ Regular participant in online programming contests, hackathons and other programming activities