R Naresh

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Research Interests

- Complex and Social Networks
- Algorithms
- Software Design
- Artificial Intelligence
- Autonomous Vehicles
- Machine Learning
- Image Processing

Education

2013-2018 (Expected) B.Tech and M.Tech (Dual Degree) in Computer Science and Engineering
Indian Institute of Technology, Kharagpur
CGPA: 7.02/10.0

2013 Class XII, Central Board of Secondary Education (CBSE)
Maharishi Vidya Mandir SSS, Chennai
Score: 95.6%

2001 Class X, Central Board of Secondary Education (CBSE)
Kendriya Vidyalaya Picket, Hyderabad
GPA: 10.0/10.0

Academic Projects

Current – Feb 2015 | **Kraken 2.0** (Autonomous Mobile Robot)
Group: Autonomous Underwater Vehicle Research Group, IIT Kharagpur
Guide: Professor C. S. Kumar

- Developing a robust autonomous mobile robot to participate in the annual AUVSI ROBOSUB held in San Diego, California.
- ROS (Robot operating system) has been adopted for software development and synchronization. ROS works on a publisher-subscriber based architecture by means of passing messages. Built different packages on the ROS stack.

Current – Feb 2015 | **Wikification via Link Co-occurrence**
Guide: Professor Pawan Goyal

- Wikification stands for the process of linking terms in a plain text document to Wikipedia articles which represent the correct meanings of the terms, can be thought of as a generalized Word Sense Disambiguation problem.

Development Projects

Feb 2015 | **Advanced Graph Calculator**

- Contributed to the development of an advanced graph calculator that plots the graph of multi-variable systems on the screen.

- The software was built on the PyQt framework using matplotlib and numpy. The PyQt framework was used for creating the GUI for the application. matplotlib was used for generating 2D/3D plots. numpy was used for explicitly generating domain for the functions to be plotted.

Dec 2014 | **IP Based Lane Follower Robot**

- Developed an autonomous lane following robot that uses common image processing techniques to detect the path in an IEEE certified workshop based on image processing organized by Technology Robotix Society, IIT Kharagpur

Dec 2013 | **Lane Follower Robot**

- Developed an autonomous line following robot using Atmel AVR microprocessor(Atmega16) in an IEEE certified workshop organized by Technology Robotix Scociety, IIT Kharagpur.

Positions of Responsibility

Current **Senior Editor**, Technology Literature Society, IIT Kharagpur

- Managing the content and design team of the society.

- Writer in the English Team, and working as a senior editor for all English publications.

Apr 2015 **Secretary**, CodeClub, IIT Kharagpur

- Part of the managing team, leading a group of 25 students.

- Conducted several events, including Microsoft code.fun.do and BITWISE, the Annual Departmental Fest of the Department of Computer Science and Engineering, alongside several fortnightly competitive coding competitions within the campus.

Apr 2015 **Team Member**, Google Students Club, IIT Kharagpur

- Organized multiple workshops and events, primarily focused on Android Development, in association with Google.

- Conducted a workshop on the Polymer Project, which received high levels of participation.

Apr 2014 **Co-ordinator**, CodeClub, IIT Kharagpur

- Part of the organizing and sponsorship team for BITWISE '14.

Computer Skills

Proficient | C, C++, Python, Java

Intermediate | Robot Operating System (ROS), HTML, CSS, mySQL

Dabbled | Linux / Ubuntu, Git

Coursework

(T)heory and (L)aboratory

- Programming and Data Structures (T/L)
- Discrete Structures
- Formal Languages and Automata Theory
- Algorithms-I (T/L)
- Software Engineering (T/L)
- Switching Circuits (T/L)