R Naresh

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Education

2013-2018 (Expected)	B.Tech and M.Tech (Dual Degree) in Computer Science and Engineering **Indian Institute of Technology**, Kharagpur	CGPA: 7.28/10.0
2013	Class XII, Central Board of Secondary Education (CBSE) **Maharishi Vidya Mandir SSS**, Chennai	Score: 95.6%
2011	Class X, Central Board of Secondary Education (CBSE) **Kendriya Vidyalaya Picket**, Hyderabad	CGPA: 10.0/10.0

Technical Skills

Programming	*Proficient:* C, C++ *Familiar:* Javascript, Python, Java, C#
Libraries/Frameworks	Node.js, AngularJS, Express, jQuery, D3, Socket.io, ROS
Markup/Templating	HTML, CSS, Sass, LaTeX
Databases	MySQL, MongoDB, PostgreSQL
Systems/Platforms	Git, AWS (RDS, S3, Redshift, DMS), Android

Experience

June 2016 – May 2016

Software Development Intern
ezDI, Ahmedabad

- Worked on a team integrating a Business Intelligence tool that aggregates data from all their products and makes the data available for easy analytics. Was solely responsible for migrating the data to a datawarehouse (Amazon Redshift) including schema conversion and data type incompaitibility handling, and built a custom server on nodejs using AWS APIs to manually replicate data and changes to it from RDS to Redshift through S3 at regular intervals.
- Implemented several proof-of-concepts to integrate a BI solution with embedding capabilities and using REST APIs to communicate with ezDI's existing platform and setup the base models for the team on Looker™ to be able to take full advantage of reusable SQL views.

April 2016 – Feb 2015

Kraken 3.0 (Autonomous Mobile Robot)
Group: Autonomous Underwater Vehicle Research Group, IIT Kharagpur
Guide: Professor C. S. Kumar

- Worked on an autonomous underwater vehicle to represent India and IIT Kharagpur at competitions held in India and abroad.
- Worked in the Image Processing Team to implement algorithms in OpenCV for the bot to successfully complete multiple task including Buoy detection and path following. Was part of the group implementing a Neural Network based adaptive image segmentation to adopt to changing lighting conditions.

Academic Projects

Current

Data extraction from biomedical literature for automating systematic reviews
B.Tech Project
Guide: Professor Pawan Goyal

- Worked on feature detection of a particular class of text (specifically, inclusion and exclusion criteria for patients) from a huge collection of biomedical literature using NLP Techniques with high precision and recall.
- Methods used include Support Vector Classifier (Scikit-learn), Latent Dirichlet Allocation (LDA) and Weighted Keyword Matching.

April 2016

Selene (A community based music-recommendation engine.)
Guide: Professor Pabitra Mitra

- Built an app that serves as a social music-recommendation engine based on YouTube that extracts usage data from *Selene* users who fall under a branch length of 5 nodes in a user's Facebook friends graph, and recommends most popular tracks among them.
- The app was built following material-design guidelines, and integrated with Musixmatch to parse the YouTube links and get relevant metadata to provide direct links to other services such as Spotify and Soundcloud.

April 2016 – March 2016

Retrieving salient sentences from Reddit AMAs
Guide: Professor Pawan Goyal

- Built a web-based summariser that provides summaries from /r/iAMA with abilities to choose any AMA from a list or through instant search (implemented with Angular autocomplete.)

- After obtaining data from the web crawler, LDA model training was done on the entire dataset and categorised using link flairs on Reddit. k-mean clustering was then used to cluster the questions and answers and summarised using lexrank and summpy. Concept tagging was then done using Alchemy API on each cluster.)

April 2015

Medical Lab Automation System
Guide: Professor Partha Pratim Das

- Developed a software built using JAVA Swing for a Medical Lab Automation System which handles and automates the requests of the management and patients.

- 3 seperate records were maintained for handling the tasks and SQL was used for interfacing with the database. Key features included scheduling of tests, managing stocks, notifications on case completion, etc.

Additional Projects

April 2016 – March 2016

Data Extractor from 2D plots
OpenSoft 2016

- Worked on a team of 15 as a part of my hostel's team in OpenSoft 2016 to build a graph extractor that detects plots in any PDF and plots the values in a tabular format.

- Was primarily responsible for detecting and scaling the ticks from the color segregated image and scale it appropriately using the axis values and generate the plot. Was also solely reponsible for generating the table structure using Python libraries and to fully build a working GUI for the application on Java Swing.

March 2015

Campus Connexions
Developed at **Microsoft Code.Fun.Do 2015**

- Developed an intra-college social networking app with real time feed from registered users that would serve as a platform for official and unofficial announcements within the college. Windows Azure was used for database management and develepment was primarily done with Visual Studio.

- Was solely responsible for building the complete front end for the app, and to connect with Azure to dynamically load content in the news feed.

Dec 2014

Object Follower Robot
Group: Technology Robotix Society, IIT Kharagpur

- Using the openCV libray, built image detection algorithms for a WSAD robot which can follow the path using the directives sent by overhead camera whose recorded images were processed and movement instructions generated.

Dec 2013

Lane Follower Robot
Group: Technology Robotix Society, IIT Kharagpur

- Created an autonomous robot operating on Rhino Board utilizing microprocessor Atmega16. Implemented AVR Programming to improve bot's locomotive efficiency and employed accelerometer to sense uni-axial vibrations and traverse accordingly.

Positions of Responsibility

Current | **Executive Editor**, Technology Literature Society, IIT Kharagpur
Apr 2016 | **General Secretary**, CodeClub, IIT Kharagpur
Apr 2015 | **Team Member**, Google Students Club, IIT Kharagpur

Coursework

(T)heory and (L)aboratory

- Programming and Data Structures (T/L)
- Algorithms-I (T/L)
- Discrete Structures
- Software Engineering (T/L)
- Formal Languages and Automata Theory
- Switching Circuits (T/L)
- Algorithms - II
- Compilers (T/L)
- Computer Organisation and Architecture (T/L)
- Matrix Algebra
- Database Management Systems (T/L)
- Operating Systems (T/L)
- Computer Networks (T/L)
- Information Retrieval

Scholastic Achievements

- Secured 99.33 percentile in JEE Mains 2013
- Secured 98.11 percentile in JEE Advanced 2013
- Secured AIR 415 in ACM ICPC – Amritapuri online round