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

Experience

Jun 2016 May 2016	**Software Development Intern** **ezDI, Ahmedabad** - Worked on integrating a Business Intelligence tool that aggregates data from all of ezDI's 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 incompatibility 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 base models to take full advantage of reusable SQL views.
Apr 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.
Apr 2016	**Selene** (A community based music-recommendation engine.) **Guide:** Professor Pabitra Mitra - Built an Android 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.

Apr 2016 Mar 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.

Mar 2016	**Studious - Course Management System** **Guide:** Professor Pabitra Mitra

- Built a complete course management system that supported authentication & authorization, User Access Control for 4 different types of users, real-time messaging with notifications (using socket.io), calendar support and all major features one can expect from a CMS including faculty management, course progression, self-evaluated tests, etc.

- The complete workflow was built using the MEAN stack. Twitter Bootstrap was utilised for making the site fully responsive.

Apr 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.

Hackathons & Workshops

Apr 2016 Mar 2016	**Data Extractor from 2D plots** **OpenSoft 2016**

- Worked on a team of 15 as a part of my hall'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.

Mar 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 development 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

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

Positions of Responsibility

Current	**Executive Editor**, Technology Literary 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)
- Discrete Structures
- Algorithms - II
- Switching Circuits (T/L)
- Operating Systems (T/L)
- Computer Networks (T/L)
- Machine Learning *
- Image Processing *

- Algorithms-I (T/L)
- Software Engineering (T/L)
- Formal Languages and Automata Theory
- Compilers (T/L)
- Database Management Systems (T/L)
- Information Retrieval
- Object Oriented Software Design *
- Advanced Graph Theory *

Scholastic Achievements

- Secured 98.11 percentile in JEE Advanced 2013
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- Secured AIR 415 in ACM ICPC – Amritapuri online round, 2014