Naresh R

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Education

2013-2018 (Expected)	B.Tech + M.Tech (Dual degree) in **Computer Science and Engineering** **Indian Institute of Technology**, Kharagpur

Technical Skills

Programming Languages	*Proficient:* C++, Python, Java, Javascript
	Competent: C, Golang
Libraries / Frameworks	Node.js, ReactJS, AngularJS, Express, Maven, JUnit, TestNG, Scikit-learn, OpenCV, ROS
Databases	MySQL, MongoDB
Systems / Platforms	Git, Docker, Linux, Android

Work Experience

Jul 17 – May 17 — **Software Engineer Intern** — **Intuit, India**
- Wrote an end-to-end GraphQL API service in Java for opting out of QuickBooks Online's core subscription.
- Deployed a Machine Learning model to help Intuit predict potential paid customers for QBO using trial data.
- Reduced erroneous reports by over 30% from other teams to QBO's Billing team with a revamped internal tool.

Jun 16 – May 16 — **Software Engineer Intern** — **ezDI, India**
- Automated migration & replication of real-time data from Amazon RDS to Redshift, optimized for full-table queries.
- Implemented proof-of-concepts to embed a Business Intelligence (BI) solution into the platform.

Apr 16 – Feb 15 — **Software Team Member** - Kraken 3.0 — **Autonomous Underwater Vehicle Research Group**
- Wrote image processing algorithms in OpenCV and ROS for tasks like buoy detection and path following.
- Worked on Neural Network based adaptive image segmentation for the bot to adapt to dynamic lighting conditions.
- Wrote the first version of a GUI for actively monitoring and controlling the bot's image parameters.

Projects

- **Learning to extract comparison points of entity pairs from Wikipedia articles**
  Worked on a novel comparative text mining task using relational tuples to model and measure semantic commonality for two given documents and tabulating them. This work was published as a poster at JCDL 2018.
- **Compiler for Tiny C (A tiny subset of the C language)**
  Built a compiler for Tiny C, a self-defined subset of the C language, using Compiler principles and techniques. The compiler itself was written in C++ with Flex and Bison for Lexical Analysis and Semantic parsing.
- **Mini Linux Shell**
  Implemented some features of the Linux Shell including redirection, piping and terminal mirroring using the C language.
- **Lyrics generator using neural networks**
  Wrote a lyrics generator using TensorFlow that generates a new song in an artist's style. A Long Short Term Memory (LSTM) Neural Network learns the artists' styles of writing including words, rhymes, chorus patterns, etc. for the task.
- **Selene**
  Built a social music-recommendation Android app that analyzes songs liked by a users' friends on YouTube and recommends them to the user as a trending feed with added song metadata using the MusixMatch API.
- **Retrieving salient sentences from Reddit AMAs**
  Built a summariser for /r/IAmA to create reader-friendly digests that are clustered by topic and presented to the user.
- **Graph Extractor**
  Built a graph extractor that uses image processing techniques to detect multivariate graphs in any given PDF and tabulates them autonomously, taking into consideration features like axis values, scales and legends.
- **MetaKGP dashboard**
  Currently working with student developers on a NUS-Mods style dashboard for IIT KGP with several utilities for the community like smart timetable, news aggregator, question paper portal and professor finder to name a few.

Activities & Leadership

- Organisation Maintainer at MetaKGP to moderate, mentor and work with the student community on several open-source projects and a self-hosted Wiki for IIT Kharagpur.
- Won 3rd place and 5th place at tech competitions Inter-IIT and OpenSoft (LBS) respectively as team captain of 10 students.
- Organised hackathons & coding challenges as a part of BitWise and managed a team of 15 students to raise sponsorship.