VARUN S VARADARAJAN

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University of Southern California, Los Angeles, CA (Cumulative GPA **3.7/**4)   AUG 2014 - DEC 2015
Master of Science, Computer Science

B M S College of Engineering, India (Cumulative GPA **9.06**/10)
Bachelor of Engineering, Information Science   SEPT 2008 - AUG 2012

TECHNICAL **SKILLS**

- **Languages and frameworks**: C, C++, C#, Java, Javascript , Python, SQL, Android SDK, MongoDB
- **Web Technologies:** ASP.NET, AngularJS, Django Python, Node.js

PROFESSIONAL EXPERIENCE

AMAZON.COM, CUPERTINO, CALIFORNIA   FEB 2017 – PRESENT
Software Development Engineer

- Developed various features such as authorization of buyers in the payments product that enables payments and donations on Alexa.

- Developed multiple tools to automate various operational tasks thereby reducing the number of high severity issues received by the team.

VISA INC., FOSTER CITY, CALIFORNIA   JAN 2016 - FEB 2017
Sr. Software Engineer

- Developed various features end to end such as detecting vulnerabilities and patching production instances and automation of Firewalls for the **private cloud** (Java API) framework that is being developed at Visa.

- Employed machine learning algorithms to solve the problem of validating requests in the Action Request System thereby reducing feedback time on requests from day to seconds. Currently being reviewed for a patent.

NATIONAL INSTRUMENTS, BANGALORE, INDIA   SEPT 2012 - AUG 2014
Software Engineer

- Developed intelligent agents that uses metrics of testing, AI and NLP algorithms such as keyword extraction to discover patterns about various features of LabVIEW, so as to establish a correlation between test cases and features. This cut down the test time by over 1000 minutes. Designed and implemented a python framework to automate graphic user testing which has reduced manual testing by 2 hours per day.

- Developed features and implemented algorithms related to Wiring and Layout in LabVIEW which is a key feature in LabVIEW.

ACADEMIC PROJECTS

INFORMATION RETRIEVAl AND WEB SEARCH ENGINE (Java)   FEB 2015 - MAY 2015
- Developed **algorithms to find exact and near duplicate documents** on data crawled from NASA websites and built URI filter plugins for **Apache Nutch** based on the developed algorithms. We were able to improve duplicate detection in Nutch by around **51%**. Developed **content based and link analysis algorithms** to index the crawled data in **Apache Solr** and developed visualizations for indexed data using **d3.js**.

SURPRISE IN TEXT (Social Network Analysis) (Python)   OCT 2015 - DEC 2015
- Designed models to calculate prior and posterior probabilities of textual features such as unigrams which were used in our algorithm to classify text as surprising or not. We were able to classify the text with a recall of about 0.85. Our algorithm was also able to quantify the amount of surprise in a given textual document.

RIVERSI (C++)   OCT 2014

- Designed admissible heuristics and implemented minimax and alpha-beta pruning with iterative deepening search algorithms to build an artificial intelligence agent that can play Riversi.

CERTIFICATIONS AND ACHIEVEMENTS

- Completed the machine learning course taught by Prof. Andrew Ng from Stanford(**coursera.org**) with score **100%** on review questions and **96%** on programming questions.
- I was also **ranked 65** in the Asia-Amritapuri regional finals of ACM-ICPC programming contest conducted in December, 2011.
- I also contribute to **dbpedia** which is an open source project attempting to build a knowledge graph**.**