Swadhyaya Kumar

Contact

Phone: **+1(949) 373-6137** | Email: swadhyayak@gmail.com | **158 Berkeley Avenue, Irvine, CA**
LinkedIn: http://www.linkedin.com/in/swadhyaya | Github: http://www.github.com/adykumar

Education

University of California, Irvine, CA (GPA:3.73/4.00)

M.S. Software Engineering *Sept 2015 – Jan 2017*

- Teaching Assistant: Introduction to Software Engineering
- Coursework: Algorithms, Software Architecture, Machine Learning, Artificial Intelligence, Information Retrieval, Software Engineering, Analysis of Programming Languages

National Institute of Technology (NIT) Trichy, India

B.Tech. Electronics and Communication Engg., Advisor – Dr. S. Raghavan *Jul 2009 – May 2013*

- Coursework: C++, Data Structures, Operating Systems
- Thesis: Metamaterials in UWB Antenna Design and Microwave Medical Imaging

Professional Experience

ServiceNow Inc., San Diego, CA

Software Engineering Intern *Jun 2016 – Sept 2016*

- Built an automation engine which detected and fixed vulnerable JEXL expressions with 70% efficiency
- Worked on product features like Currency and Application Transactions for the new version roll-out
- Designed a module to track JUnit testing progress for incremental ServiceNow platforms which exposed unit-test coverage levels and areas of improvement

Intel Corporation, Bangalore, India

Software Development Engineer *Jul 2013 – Aug 2015*

- Collaborated on Advanced Threat Defense(ATD)- Family Classification; the C++ based module's algorithm improved advanced malware detection from 65% to 80% for ATD
- Designed a Django-based web module that served malware information and post-analysis database for 2 million+ entries
- Implemented Remediation Kit functionality which measures the effect of malicious files on consumer devices and attempts to reverse the damage caused by 40+ families of malware

Skills

Languages/Modules: Java, C++, C, Python, JavaScript, Numpy, Octave, Django, HTML/CSS, SQL

Projects

Information Retrieval, Next Gen Search Engine *(Python)* *Winter 2016*

- Designed and deployed a web-crawler to index 35k UC Irvine domain web pages; implemented a Page Rank algorithm for queries on this document set
- Implemented a Contextual Search Engine based on the data collected for UC Irvine that is user and geo-location sensitive

Nine Men's Morris, Artificial Intelligence *(Java)* *Fall 2015*

- Used the Minimax algorithm to implement the AI game engine of Nine Men's Morris game
- Modified game heuristics which led to improved AI play approach in different stages of the game, based on opposition actions

Family Classification, Advanced Threat Defense- Intel *(C++)* *Oct 2013- Dec 2014*

- Implemented n-gram comparison of assembly level instructions of unknown network traffic against known malware families to detect likely candidates for malware detection
- Automated parallel entry of strong malware candidates into the repository to improve detection of evolving malware and zero-days.

Gender Recognition By Voice, Machine Learning*(Python)* *Fall 2016*

- Used ensembles of XGBoost, Neural Network and Decision Trees to predict gender from the given samples of 20 features for voice data. The algorithm showed a correct prediction rate of 99.7%

Awards & Publications

- Ramaraj, Raghavan, Bose, Kumar, "Elliptical Split Ring Resonator: Mathematical Analysis, HFSS Modeling and Genetic Algorithm Optimization," Progress In Electromagnetics Research (PIER) Conference 2012, Moscow, Russia, Aug. 2012
- Kumar, Bose, Ramaraj, Raghavan, "Mathematical Modeling, Equivalent Circuit Analysis and Genetic Algorithm Optimization of an N-sided Regular Polygon Split Ring Resonator," Elsevier Procedia Technology, Vol. 6, 2012