Swadhyaya Kumar

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Education	University of California, Irvine, CA (GPA:3.73/4.00) M.S. Software Engineering • 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 • 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 • 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 Security, Bangalore, India Software Development Engineer Collaborated on Advanced Threat Defense(ATD)- Family Classification; the C++ based module's algorithm improved advanced malware detection for ATD Implemented ATD features and modules within the Agile based development lifecycle; performed Linux-based development, automation, testing and debugging Designed a Django-based web module that served malware information and post-analysis database for 2 million+ entries
Skills	Java, C++, C, Python, Agile Methodologies, Numpy, Octave, Django, HTML/CSS, SQL
Platforms	Linux, Windows
Projects	 Information Retrieval, Next Gen Search Engine (Python) 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 geolocation sensitive
	 Nine Men's Morris, Artificial Intelligence (Java) Used the Minimax algorithm to implement the AI game engine of Nine Men's Morris game and prune the search space for optimization 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++) 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.

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

• 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%

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