ARUN KALYANASUNDARAM

PERSONAL INFORMATION

Areas of Interest: Social Media Analytics, Applied Machine Learning, Multi-Agent Systems.

Email: arunkaly@cs.cmu.edu, arun.kalyan.sundaram@gmail.com Tel: 412-608-9841

Homepage: http://www.cs.cmu.edu/~arunkaly *Github*: https://github.com/arunk054

EDUCATION

Ph.D. in Computation, Organizations & Society GPA: 4.00 Aug. 2013 - Present
Carnegie Mellon University
School of Computer Science

Master of Technology in Computer Science. GPA: 3.89 Jul. 2011
International Institute of Information Technology Bangalore (IIIT-B)

Bachelor of Engineering (Hons.) GPA: 8.2 out Jun. 2006
Electronics & Instrumentation Engineering of 10.0
Birla Institute of Technology & Science, Pilani (BITS, Pilani)

PROFESSIONAL EXPERIENCE

VMware Inc., Palo Alto – *Summer Intern* May 2015 – Aug. 2015

- Developed an auto-scaling service for a cloud computing platform and evaluated its performance by porting a cloud native app benchmark called *acmeair*.
- Designed workloads using Apache JMeter to simulate real world scenarios.
- Developed automation scripts to deploy the benchmark and display performance measures such as application throughput and response time.

Hewlett-Packard Company, India - *Senior Software Engineer* Jul. 2011 – Jul. 2013

- Launched several experiments on Amazon Mechanical Turk such as refer a task to friends on Facebook, video analytics, and goal gradient effect on worker performance.
- Filed two patents – a) Task Assignment and b) Result Aggregation in Crowdsourcing.

Hewlett-Packard Labs, India - *Research Intern* Jan. 2011 – Jun. 2011

- Algorithms to detect influential users in a social network and implemented an incentive based routing app on Twitter.

Novell Inc., India - *Senior Software Engineer* Jul. 2007 – Jul. 2009

- Developed package management features for the SUSE Linux Operating system.
- Led a team of eight engineers on two sprints that lasted for three months.

COMPUTER SKILLS

Programming Languages: Java, C++, JavaScript, Python.

Software Tools: R, Weka, Apache JMeter, Matlab, SPSS.

GRADUATE COURSE WORK

Systems: Distributed Computing, Operating Systems, Computer Architecture.

Analytics: Applied Machine Learning, Computational Modeling, Network Analysis.

PROJECTS *(Selected)*

A Machine Learning Approach to Automatically Label Issues on Github

The goal of this project is to predict labels assigned to issues on Github. Both text and social features were used in a Stacked classifier in Weka (also modified its source code).

Identifying Influential Users in a Social Network

Developed an algorithm to detect the top-k influential users in a network and evaluated it on a set of simulated networks and a co-authorship network. (*published*)

An Agent-based model of Edit Wars in Wikipedia

The goal of this project is to estimate the time taken for an edit war to reach consensus. Developed a multi-agent model of the behavior of editors on Wikipedia. (*published*)

Deadlock Detection in JAVA and C# Libraries using Static Analysis

Developed a parser to generate method invocation graphs from C# CIL (Common Intermediate Language) and Java disassembled code to detect cycles in the call graph

PUBLICATIONS - PEER REVIEWED CONFERENCES (*Selected*)

- [1st Author] "*An Agent-Based Model of Edit Wars in Wikipedia: How and When is Consensus Reached"*, In ACM Winter Simulation Conference 2015.
- [1st Author] "*Exploiting Data Parallelism in SELinux Using a Multicore Processor"*, In Computer Society of India, 2012.
- [1st Author] "*Fail-Stop Distributed Combinatorial Auctioning Systems with Fair Resource Allocation"*, In IEEE CASE 2011.
- [Co-Author] "*From Personal Tool to Community Resource: What's the Extra Work and Who Will Do It?*", In ACM CSCW 2015.
- [Co-Author] "*A Network Pruning Based Approach for Subset Specific Influential Detection"*, In ACM WebSci 2012. *(Nominated for the best paper award)*