Arun Dunna

Research Assistant

June 8, 2018
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Research Interests

Network measurement, networks, censorship circumvention, improving digital privacy/security, and predicting financial markets through stochastic models.

Education

University of Massachusetts Amherst — Amherst, MA
M.S. Computer Science — *May 2018 – May 2020*

University of Massachusetts Amherst — Amherst, MA
B.S. Computer Science, Minor: Mathematics — *Aug. 2016 – May 2018*

Experience

University of Massachusetts Amherst — Amherst, MA
Departmental Assistant — *May 2018 – Aug. 2018*

– Departmental assistant in Computer Science department to perform research in Calipr Lab, focused in network theory and coding theory. Working on multiple networks projects, such as Multi-CDN and analyzing China's firewall.

University of Massachusetts Amherst — Amherst, MA
Research Experience for Undergraduates — *May 2017 – Aug. 2017*

– Awarded stipend from grant to work in Calipr Lab at UMass on network measurement projects, most notably MultiCDN. Worked on projects throughout the summer, and did key parts of analysis for the final paper.

nMomentum Corporation — Atlanta, GA
DevOps — *Jan. 2010 – Current*

– Deploy & manage critical network infrastructure (web/storage servers, encrypted file systems, secure remote file synchronization). Develop websites and software for company and its clients.

Aura Political Group — Atlanta, GA
Information Technology Specialist — *Aug. 2015 – Aug. 2016*

– Developed software and websites for clients. Deployed and managed encrypted communication servers for secure communications between firm and clients.

Publications

1. Characterizing the Deployment and Performance of Multi-CDNs. Rachee Singh, Arun Dunna, and Phillipa Gill. Submitted to IMC 2018. Boston, MA.

Skills

- **Languages:** Bash, Bro, C, C++, C#, CSS, HTML, Java, JavaScript, LaTeX, Lua, PHP, Python, R, Ruby, SQL, XML
- **Platforms:** Android, Unix, Windows
- **Specializations:** Cryptography, cybersecurity, Internet measurement, machine learning, networking, software/web development, Unix systems

Projects

- **sCTF**, https://sctf.io *Dec. 2014 – Jan. 2018*

  Founded online capture-the-flag competition focused on K-12 students. Largest had over 4000 competitors (K-12 and university students, industry professionals), and 56000 problem submissions.

- **STASiS**, https://github.com/adunna/STASiS *Oct. 2016*

  Situational Analysis System: A tool for automatically monitoring for specific situations, such as a fire or a drunk driver, through visual input (picture or video), machine learning, and statistical analysis, all packaged with a nice front-end. Developed in 36 hours at HackUMass 2016, winner of MITRE Award.

Awards

- **NSF Research Experience for Undergraduates** *Summer 2017*
  National Science Foundation
- **Dean's List Honors** *Aug. 2016 - May 2018*
  University of Massachusetts Amherst
- **Chancellor's Award Scholarship** *Aug. 2016 - May 2018*
  University of Massachusetts Amherst
- **MITRE Award (STASiS)** *Oct. 2016*
  HackUMass