Arun Dunna

Software Engineer
PhD Student

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https://adunna.me

Education

University of Massachusetts Amherst	Amherst, MA
M.S. Computer Science	*May 2018 – Dec. 2020*
University of Massachusetts Amherst	Amherst, MA
B.S. Computer Science, Minor: Mathematics	*Aug. 2016 – May 2018*

Experience

Yext, Inc.	Washington, D.C.
Software Engineer	*Jan. 2021 – Current*
Facebook, Inc.	Washington, D.C. (Remote)
Security Engineering Intern	*May 2020 – Aug. 2020*
IIJ Innovation Institute	Tokyo, JP
Research Intern	*Jun. 2019 – Aug. 2019*
University of Massachusetts Amherst	Amherst, MA
Research Assistant	*Sep. 2017 – Jan. 2021*
University of Massachusetts Amherst	Amherst, MA
Research Experience for Undergraduates	*May 2017 – Sep. 2017*
nMomentum Corporation	Atlanta, GA
DevOps	*Jan. 2010 – Dec. 2020*

Publications

1. **Arun Dunna**, Zachary Bischof, and Romain Fontugne. Sanitizing a View of Consumer Broadband in the United States. *Network Traffic Measurement and Analysis Conference (TMA)*. Berlin, Germany. Jun. 2020. **(AR 33%, Best Open Dataset Award)**

2. Rachee Singh, **Arun Dunna**, and Phillipa Gill. Characterizing the Deployment and Performance of Multi-CDNs. *ACM Internet Measurement Conference (IMC)*. Boston, MA. Oct. 2018. **(AR 23%)**

3. **Arun Dunna**, Ciarán O'Brien, and Phillipa Gill. Analyzing China's Blocking of Unpublished Tor Bridges. *USENIX Workshop on Free and Open Communications on the Internet (FOCI)*. Baltimore, MD. Aug. 2018. **(AR 39%)**

Skills

- **Languages:** C++, CSS, HTML, Java, JavaScript, LaTeX, Lua, PHP, Python, R, Rust, SQL, Zeek

- **Platforms:** Android, Unix & Unix-like, Web, Windows

- **Specializations:** Censorship systems, cryptography, cybersecurity, Internet law, Internet measurement, machine learning, machine learning platforms and pipelines, networking, software/web development, Unix & Unix-like systems

- **Technologies:** git, Mercurial, ML frameworks, MySQL, NLP frameworks, numpy, React, scipy

Projects

- **Text-Audio Synchronization Engine**, github.com/adunna/tase   *Sep. 2018 – Feb. 2019*

  Scalable and modular synchronization framework designed to associate positions in text with positions in corresponding audio. Primary example is timestamp position in audiobook with word position in ebook. Implemented using DeepSpeech.

- **sCTF**, 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**, adunna.me/stasis-project/   *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 for Project in Best Interest of Community.

Awards

- **Best Open Dataset Award**   *Jun. 2020*
  Network Traffic Measurement and Analysis Conference (TMA)

- **ACM SIGCOMM/IMC Shadow TPC Travel Grant**   *Jul. 2018*
  Association for Computing Machinery

- **Bay State Master's Program Scholarship**   *May 2018 – May 2019*
  University of Massachusetts Amherst

- **NSF Research Experience for Undergraduates**   *May 2017 – Sep. 2017*
  National Science Foundation

- **MITRE Award (STASiS)**   *Oct. 2016*
  HackUMass

- **Chancellor's Award Scholarship**   *Sep. 2016 – May 2018*
  University of Massachusetts Amherst