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Employment

Jane Street Capital - Software Engineer (Tech Lead, Distributed Systems) Sep. 2021 – Present
- Developing and supporting core distributed technical infrastructure that is mission-critical to the whole firm, including but not limited to an eventually-consistent monitoring system, a publish-subscription system, and a distributed coordination system.
- Leading a team of 9 in developing an internal critical monitoring system; proposed and led several architectural changes that resulted in significant rewrite to the system that supported tripling the load without any downtime.
- Built a resillient API to subscribe to sharded redundant servers for production system alerts and their updates without disruptions, that's used for 20,000+ times a day; and we now have a whole team working on building an automation and notification ecosystem using the API.
- Led and contributed to 100+ investigations of production issues, both within my direct team and for larger firmwide incidents, that led to discovery of bugs and producing patches for glibc, OCaml Compiler, Kafka, Zookeeper, and various internal proprietary software and libraries.

School of Computer Science and Engineering, UNSW Sydney - Casual Academic Jan. 2020 – Sep. 2021
- Taught 500+ undergraduate and postgraduate students Computer Networks (COMP3331/9331), Database Systems (COMP3311), Web App Security (COMP6443/6843), Advanced Operating Systems (COMP9242), Web Data Compression and Search (COMP9319)
- Developed course infrastructure for web application security course with 100+ micro-services in a Kubernetes cluster
- Designed and marked assignment and exam challenges
- Run consultation sessions for C language users to answer questions on Linux's low-level socket syscalls

Jane Street Capital - Software Engineer Intern Dec. 2020 – Feb. 2021
- Worked on optimizing performance for internal distributed systems and reduced CPU usage for key routines by 80%
- Rewrote one of the servers for the next generation of one of our core market data system from scratch
- Contributed 12,000+ lines of code to our production OCaml, Java, and Scala codebase

Education

University of New South Wales, Sydney Australia Jul. 2018 – May. 2021
B.S. *in Computer Science*
Average Mark for all Comp-Sci courses: 93.8/100, High Distinction
Transcript at https://adamy.io/transcript

Activities

Capture the Flag (CTF) Author Mar. 2019 – Sep. 2021
Created 10+ CTF challenges (adamy.io/ctfs) for the community, including for SecTalks Sydney, UNSW Security Society, and SECedu

Cybersecurity Researcher Feb. 2015 – Sep. 2021
Discovered 10+ vulnerabilities in various bug bounty programs like Atlassian's

Google Developers Community Programs - Translator (Volunter) Jun. 2016 – May. 2018
Reviewed and translated Google's dev videos, docs, and blog posts. Invited to Google I/O as a Community Partner

Side Projects

CTFProxy (Kubernetes, Docker, Bazel, Golang, Python, Jsonnet) github.com/adamyi/CTFProxy
Scalable CTF infrastructure, with a BeyondCorp-like zero-trust network and simple infrastructure-as-code configuration. This was used for SECedu CTF 2019 and UNSW's Web Application Security (COMP6443/6843) course

MessageOnTap (Java, Android, HCI, NLP) github.com/MessageOnTap
A development framework for developers to implement intelligent plugins for instant messaging apps by suggesting actions based on chat message semantics (research project at HCII, Carnegie Mellon University)

Productimon (Golang, C, C++, JavaScript) github.com/productimon/productimon
A cross-platform activity/usage/screen time tracking and analysis tool that supports Linux, Windows, macOS, and Chrome OS/Chromium OS with a cross-platform core codebase that's easy to extend to other platforms

MUNPANEL (PHP) github.com/munpanel/MUNPANEL_v1
An online high school conference registration system, which had served 3 conferences, 170+ registered schools, 2,000+ registered users, and 75,000+ USD cash flow

And many more, check them out on adamyi!

Awards

Dean's Award   2020
  UNSW Faculty of Engineering, for the top 100 students across the entire Faculty of Engineering.
1st Place   2019
  UNSW CSE Performance Prize for Year 2, for the single best performing second year CSE student.
CommBank Cyber Prize   2019
  Commonwealth Bank of Australia
2nd Place   Oct. 2018
  Cyber Security Challenge Australia (CySCA), run by Australian Government (Australian Cyber Security Centre, Australian Signals Directorate, AustCyber), Telstra, PwC, Cisco, Microsoft, Commonwealth Bank, Splunk, BAE Systems, HackLabs
Gold Medal   Apr. 2015
  International Exhibition of Inventions of Geneva, run by Swiss Federal Government