Omri Bornstein

Software Engineer

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Education

South Australian Certificate of Education, Australian Science & Mathematics School (ASMS),

Adelaide

2020 Bachelor of Computer Science, Monash University, Melbourne

Present

Skills

• Computer Programming Languages: Go, TypeScript/JavaScript, Python, Kotlin/Java, C/C++

• Document Markup Languages: HTML/CSS, TEX/IATEX, Markdown

Databases: MongoDB

Tools: Git, GitHub/GitLab, Docker, Kubernetes, CI/CD

• Platforms: Linux, Cloud Native, web servers/browsers, macOS, Windows

• Soft Skills: technical writing, presenting/public speaking, research, troubleshooting/debugging, explaining, collaboration/teamwork

Leadership Experience

General Representative, Monash University's Cyber Security Club (MonSec), Melbourne May 2021

January 2022

January 2022 Secretary, Monash University's Cyber Security Club (MonSec), Melbourne

June 2022

June 2022 Vice President, Monash University's Cyber Security Club (MonSec), Melbourne

Present

Projects

Open-Source

January 2022 cocainate, https://github.com/AppleGamer22/cocainate

• A cross-platform re-implementation of the macOS utility caffeinate that keeps the screen turned on either until stopped, for a set duration of time or while another process still runs.

May 2022 stalk, https://github.com/AppleGamer22/stalk

• A cross-platform file-watcher that can run a command after each file-system operation on a given files or simply wait once until a file is changed.

raker, https://github.com/AppleGamer22/raker

• A social media scraper that is interfaced via a server-side rendered HTML user interface (or a CLI), and is managed by a REST API and a NoSQL database.

December 2021 ctftime-discord-bot, https://github.com/monsec/ctftime-discord-bot

• A discord bot I made for the MonSec Discord server, that fetches statistics about competing teams from CTFtime, and displays them in the Discord interface.

June 2020 sp, https://github.com/AppleGamer22/sp

January 2021

• My first attempt at building a Minecraft server plugin. This plugin adds the requirement that the player supplies the password (via a server command) before proper server interaction is allowed, and as long as the password isn't provided, the currently-unauthorized player is blinded and immobile.

Research

August 2021 Software Contributor, Monash University's FIT2082 unit, Melbourne

- December 2021 I contributed to an existing codebase, based on prior research by (Gange, Harabor and Stuckey, 2021) about Lazy CBS, their Multi-Agent Path Finding (MAPF) algorithm.
 - I modified the Lazy CBS codebase such that the algorithm also outputs the final set of constraints that is used to rule out paths, such that Lazy CBS is formally an Explainable Multi-Agent Path Finding (XMAPF) algorithm.
 - I learned how to enable Python-to-C++ bindings, such that the compiled Lazy CBS codebase can be used as a Python-facing library for future projects.

Freelancing

$\mathrm{June}\ 2021$

December 2021 • I implemented a fault-tolerant file back-up system that enables the continuation of file transferring from an variably-approximate point in time before the back-up disruption.