Osama Esmail

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EDUCATION

University of Illinois at Urbana-Champaign
- BS in Computer Science 05/2021
- BS in Mathematics

EXPERIENCE

Microsoft 07/2022 - Present
Software Development Engineer
- Built CBL-Mariner 2.0 (Microsoft's Linux Distro) **Docker** containers and managing packages for different development environments
- Overhauled **Golang** build tools to streamline builds, pipelines, and releases

InnoPeak Technology 07/2021 - 07/2022
Software Development Engineer
- Implemented research and development algorithms for **C++** & **Android applications**
- Parallelized real-time image analysis & object detection algorithms

IMC Trading 06/2020 - 08/2020
Quantitative Trading Intern
- Analyzed and simulated block trading strategies and their profits in **JupyterLab** with **Python**

Amazon 05/2019 - 08/2019
Software Development Engineering Intern
- Contributed to internal subscriptions API written with **Spring Java Framework**
- Displayed API contributions in internal tool written in **AngularJS**

Illinois Geometry Lab 01/2019 - 05/2019
Undergraduate Researcher
- Analyzing Champaign County health inspection data to streamline future inspections
- Collaborating to create a machine learning model for the data using **TensorFlow**

Illinois Rocstar 05/2018 - 08/2018
Software Engineering Intern
- Developed product website front-end using **ReactJS**, creating new components and overhauling various aspects of the front-end
- Debugged and updated **Python Flask** back-end, including modifying models, working with **NoSQL**, and adding new features to be implemented on the front-end

PROJECTS

Sports Betting Bot
- Derived a heuristic for predicting which NBA games to place bets on based on win probability (10000% quarterly return over 6 months)
- Deployed an automated **Python** bot with **Selenium** for placing bets daily

Optimal Rubik's Cube Solver
- Threaded processes asynchronously in **C++** to speed up a Rubik's Cube solver
- Used **CUDA** to further parallelize the solver

Schedule Optimizer
- Deployed a **ReactJS** website (**NodeJS** backend) with 4 group members for making conflict-free schedules at our university.

CS:GOtcha
- Developed fully functional first-person shooter with a friend using **Unity3D** and various **C#** & **JavaScript** scripts.

SKILLS AND INVOLVEMENT

Computer Languages: Python, JavaScript, Golang, C++, Java, HTML/CSS3, C#, Bash
Frameworks, Libraries and Technologies: Docker, RedHat RPM, TensorFlow, PyTorch, NumPy, Pandas, Selenium, CUDA, ReactJS, Flask, Git, Heroku, MongoDB
Interests: Chicago Bulls, Chicago White Sox, Green Bay Packers, Trivia, Cooking Shows, Futurama