Matthew Lam

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matthewtlam.com github.com/matthewtlam

Experience

Incoming Software Engineer Intern
May 2022 - Present

Arctic Wolf

Image Processing Engineer Intern
Sep - Dec 2021

Teledyne DALSA

- Pioneered and implemented *MATLAB* testing framework for image capturing simulation tool, which reduced manual testing process time from **4 hr to 5 min**
- Streamlined the image capturing simulation tool to be **40%** faster and scalable
- Spearheaded camera system integration feature by working on image rescaling, noise reduction, frame rate increase and image shading

Software Engineer Intern
Jan - Apr 2021

Rocscience Inc

- Built a dialog link testing tool using *CurlLib* and *OpenMP* to validate broken tutorial and documentation links
- Drove implementation of new multithreaded critical surface search method using *C++*, which found **2%** riskier failure slopes
- Designed and developed a material strength-based convergence functionality that reduces convergence time by **6%**

Data Engineer Intern
Sep - Dec 2019

Praemo

- Developed anomalous machine tool-bit detection by tracking, filtering and flagging time-series data using *Python* and *Redis*
- Improved performance from **30 to 5 minutes** using *SciPy* and *Kubernetes* by refactoring the time-series prediction system

Cryptographic Security DevOps Intern
Jan - Apr 2019

Scotiabank

- Developed of a *PowerShell* script using *Azure* API to backup, restore and rotate **20,000+** key vault secrets and certificates to meet security audit requirements

Initiatives

Software Product Sprint Participant
May - Aug 2020

Google

- Led a team of developers to create educational resource sharing MVP using *Java*, *Javascript*, *HTML*, and *CSS* by leveraging various *GCP* APIs, including App Engine, Datastore, and Sentiment Analysis
- Implemented a newsfeed post rating system that responded to real-time user-generated data using *jQuery*

Software Infrastructure Developer
Sep - Dec 2019

Watonomous

- Decreased debugging time by **33%** by rendering object detections and vehicle path predictions in the real-time visualization tool using *C++*, *ROS* and *RViz*

Education

Bachelor of Computer Science
University of Waterloo

Sep 2018 - Apr 2023 (Expected)

Relevant Courses
- Algorithms
- Operating Systems
- Object Oriented Programming

Skills

Languages

Python, C/C++ , MATLAB, Java, SQL , JavaScript, HTML, CSS

Tools

Kubernetes, Docker, Valgrind, GDB, PowerShell, Bash, Git

Interests

Power Lifting | Bouldering
Technology | Video Games
Guitar | Mental Health