Jason Yuan

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EDUCATION

University of Waterloo   Cumulative GPA: **3.90** / 4.00
3RD YEAR, BACHELOR OF SOFTWARE ENGINEERING (PRES. SCHOLARSHIP OF DISTINCTION)   Sep. 2021 - Present
- Select courses: *Data Structures & Algorithms, Operating Systems, Linear Optimization, Graph Theory, Databases, OOP Principles*

EXPERIENCE

AMD | GPU Virtualization Software Engineer (Co-op)   Markham, ON
Stack: C/C++, Linux Kernel Drivers, Windows Drivers, PowerShell, WinDbg, Hyper-V, InfiniBand Networking   Sep. 2023 - Dec. 2023
- Architected a unified communications library that allows Linux client applications to control *either* the user or kernel mode amdgpu driver with the same public interface
- Decreased manual setup time of prototype AMD MI300X datacenter clusters by 30% by creating a series of PowerShell scripts to reliably initialize distributed networking capabilities (details under NDA)
- Debugged graphics driver crashes and hangs on Windows environments with WinDbg, resolving gating issues and unblocking the development team for Hyper-V GPU virtualization

Curvegrid, Inc. | Software Engineering Intern   Tokyo, JP
Stack: Go, Ethereum, PostgreSQL, Kubernetes, Webhooks, Blockchain   Jan. 2023 - Apr. 2023
- Resolved a bug in the open source go-ethereum reference implementation that returned improper JSON-RPC responses to clients
- Optimized platform efficiency by developing a Kubernetes leader election module in Go to reduce duplicate work between pods
- Implemented webhooks into a blockchain transaction monitoring system to securely notify clients of transaction progress and event status, allowing clients to automate workflows with downstream processes based on real-time data
- Reduced CI unit test duration by 35% by engineering a parallelized test framework so concurrent tests can share a single database

Dreamschools | Full Stack Software Engineer (Co-op)   Toronto, ON
Stack: React, Node.js, Express.js, PostgreSQL, Stripe, BitBucket, Cypress, AWS   May 2022 - Aug. 2022
- Reduced page load time by up to 60% through various optimizations including bundle splitting, file compression, and SQL indexing
- Patched a vulnerability where a client could forge responses to simulate transactions, protecting against potential false payments
- Saved over 20 minutes per push by scripting an automated CI/CD pipeline that handled building, E2E testing, and deployment on AWS

PERSONAL PROJECTS

Secure Discord (WIP)   Oct. 2023 - Present
Stack: Rust, Svelte, Chrome extensions, WebAssembly, LibSignal encryption
- Engineered a browser extension that injects UI components and logic into Discord to enable E2E encryption of messages using Signal's Double Ratchet Protocol compiled into WebAssembly from Rust

Anomia Mobile | Pending Official Licensing   Nov. 2022 - Present
Stack: Rust, React Native, AWS EC2, PostgreSQL, WebSockets
- Built a mobile version of the Anomia board game in React Native that handles >100,000 real-time concurrent multiplayer games on one Rust backend using WebSocket communications

Imaginate | CalHacks 2022   Nov. 2022
Stack: HTML, TS, Python, TailwindCSS, Stable Diffusion, Flask, Generative AI, Chrome extensions
- Developed a browser extension that integrates Stable Diffusion on a Flask backend to allow users to right-click and modify any image with generative AI while browsing

SKILLS

Languages   Rust, C/C++, Python, TypeScript, JavaScript, Go, HTML/CSS, C+, Java, Bash, PowerShell

Technologies   Node.js, PostgreSQL, Docker, K8s, Windows & Linux drivers, AWS, Flask, React, Vue, Svelte, PyTorch