Daniel Chen

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Education

University of Waterloo | *B.A.Sc. in Computer Engineering, Honours* *Sep 2022 – Apr 2027*

- **Involvements**: UW Orbital Satellite Design Team, Intramurals (Beach Volleyball), Creative Writing Club (Founder)
- **Hackathons**: TreeHacks 2025, StormHacks 2022 (EdTech Winner), YRHacks 2022 (IBM Open Source Winner)

Experience

Jane Street | *Software Engineering Intern* *May 2026 – present*

- Moving commits and branches in version control to the cloud

Rippling | *Software Engineering Intern* *Feb 2026 – Apr 2026*

- Introduced new isolated **rule-based validator framework** for customer data and domain layer between presentation APIs and databases, reducing data discrepencies by **30%**
- Architected new declarative derived field framework based on data dependency graphs, **enabling cacheable incremental computations** for business data
- Added support for jumping to future and past snapshots of database state via a deterministic, replayable-at-any-time-in-history change engine employing bitemporal data stores

Squint | *Software Engineering Intern* *May 2025 – Aug 2025*

- Architected **real-time pub/sub notifications framework & pipeline**, enabling SLA-compliant alerts for enterprise clients by routing system events to create **300+ daily** downstream notifications
- Engineered **multi-language data models transformer** by parsing and editing **TypeScript & Python ASTs**, enabling **unified type safety** across the entire stack: web, mobile, and backend
- Built dependency-aware deployment system that performs static analysis on import graphs and code diffs to identify impacted services, **enabling automated partial rollouts** and **cutting deployment latency by 90%**

Magna (YC W22) | *Software Engineering Intern* *Sep 2024 – Dec 2024*

- Investigated and **improved initial load times by >60%** for client sites by caching blockchain reads in Redis
- Migrated internal systems & libraries to an event-based architecture, reducing query boilerplate by **50%**

Dropbase (YC W20) | *Software Engineering Intern* *May 2023 – Aug 2023*

- **Shipped static analysis tool** for platform's custom SQL dialect by recursively processing an abstract syntax tree
- Architected platform to clone, sync, and visualise databases for **3000+ enterprise users** in Python and React
- **Designed merge conflict resolution system** to handle data mismatches, reducing user-reported errors by **20%**

Hack the North | *Backend & Infrastructure Lead* *Mar 2023 – Jan 2025*

- **Led 6-person engineering team** to ship shift scheduling and hardware inventory tools to **1500+ event attendees**
- **Launched bus registration platform** to **1000+ hackers**, featuring live capacity tracking and email confirmations
- Overhauled CI/CD pipelines, **speeding up builds by 35%** by parallelising testing and type checking with Buildkite
- Profiled performance bottlenecks by adding **OpenTelemetry tracing** to Grafana dashboards on **Kubernetes**

Projects

Mandown | *Python, Qt*

- Created a CLI and GUI to download and convert webcomics into e-ink-optimised files open source over **5 years**
- Expanded support for new formats and features **based on user demand**, minimising regressions with E2E tests
- Implemented **image caching and multithreading** to increase download and processing speeds by **300%**

Technical Skills

Languages: Python, TypeScript/JavaScript, Rust, Java, C/C++, OCaml, SQL, HTML/CSS
Frameworks: Node, React, Vue, GraphQL, Spring Boot, Express, Redis, Terraform, Prisma, Apollo, Axum
Tools: Linux, Postgres, Git, Docker, AWS, GCP, Kubernetes, Figma, Jenkins, nginx