

Morgan Brooks

Victoria, B.C., Canada

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<https://github.com/mcassels>

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Full-stack software engineer with proven experience transforming user needs into effective software solutions. Currently at UrbanLogiq, building a data analytics platform for government. Proficient in TypeScript, React, Rust, and Python; passionate about creating software solutions for real-world data and real-world problems.

Work Experience

Senior Software Engineer

Nov 2023 - Current

UrbanLogiq (Vancouver, B.C.)

- Full stack engineer at a startup building a data analytics platform for government agencies: Web application frontend (React + Typescript, [MapboxGL](#)); Rust and Golang APIs; Azure, MongoDB, PostgreSQL; ETL data pipelines (Python + Kedro); CI/CD processes and infrastructure (GitLab, Azure, Kubernetes).
- Delivered an [RAG](#)-based AI product in under 2 months: co-developed the backend (Rust + Python); led the frontend implementation including rapid iteration with the UX team.
- Propose and execute architectural and API changes to achieve roadmap requirements and/or increase development velocity.
- Administer the information security management system, maintaining 4 ISO certifications.
- Direct onboarding processes and mentor junior engineers to achieve role-specific milestones and their personal career development goals.

Software Engineer

Apr 2023 - Nov 2023

UrbanLogiq (Vancouver, B.C.; remote from United Kingdom)

- Consulted with the data engineering team to improve efficiency: Designed and implemented tooling (Python and Rust CLIs; internal web application) and CI/CD processes; mentored colleagues to troubleshoot integration between data pipelines and backend APIs.
- Owned the delivery of a major new user experience: built the React frontend in close collaboration with the UX team; patched APIs; created internal tooling and documentation.

Software Engineer - Lead

Jan 2021 - Apr 2023

UrbanLogiq (Vancouver, B.C.)

- Led the frontend development team handling dynamic querying of large diverse datasets.
- Developed and maintained the data platform's Rust backend: serverless database built on Microsoft Azure, [Apache Parquet](#) and the [Datafusion query engine](#); custom graph database built on PostgreSQL; custom blockchain-like object store ([Flatbuffers](#), MongoDB).
- Managed agile scrum processes, bug triage, task prioritization, and sprint planning.
- Achieved 2 new data privacy ISO certifications as a member of the security committee.
- Implemented a Single Sign-On integration with a government identity provider.
- Conducted candidate screening, interviews, onboarding, and offboarding.

Software Engineer

Aug 2019 - Jan 2021

UrbanLogiq (Vancouver, B.C.)

- Played a key role in a major product version transition that replaced multiple APIs (JavaScript, Ruby-on-Rails, Go) with a single new Rust API and built a new web application frontend (Typescript + React) while maintaining functionality for existing customers.

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- Built data pipelines in Python using [Kedro](#) to clean and ingest diverse datasets.
- Quickly learned Rust; began contributing immediately to the API and supporting Rust OSS.
- Reviewed, critiqued, and proposed architecture designs for the new platform architecture.

Agile Cloud Developer Intern

Sept 2017 – Apr 2018

SAP Canada (Vancouver, B.C.)

- Contributed to the geospatial mapping data visualization tool for SAP Analytics Cloud.
- Co-led the implementation of a new visualization feature (JavaScript; Jasmine tests).

Volunteer Experience

James Gordaneer Painting Adoption Project

March 2024 - current

Fundraiser for the Victoria Visual Arts Legacy Society

- Created <https://jamesgordaneer.com/>, a website to facilitate the “adoption” of damaged paintings by a local Canadian artist, to raise funds for a memorial bursary in his name.
- React + Typescript + Tailwind responsive [frontend](#); Airtable; AWS; Python [data ingestion](#) process; [Rust API](#) to cache Airtable requests (Airtable’s low rate limit affects SEO).

Tutoring and English Language Teaching

- Tutor; member of tech advisory committee. *Victoria Literacy Connection*. May 2024 - current.
- English conversation group facilitator. *Nottingham City Libraries*. Oct 2023 - Dec 2023.
- Tutor for disadvantaged youth in high school. *Pathways to Education*. 2017 - 2023.

Education

B.Sc. in Computer Science; Linguistics Minor

Sept 2014 – Apr 2019

University of Victoria (Victoria, B.C.): Dean’s List, Excellence Scholarship

2019 LSA Linguistic Institute: Linguistics in the Digital Era

Jun - Jul 2019

Summer Institute at the University of California, Davis: courses in Computational Linguistics

TRIUMF High School Physics Fellowship

Jul - Aug 2014

Canada’s National Research Centre for Particle and Nuclear Physics: research internship

Presentations and Papers

- Indigenous Languages in New Media. *Working Papers of the Linguistics Circle of the University of Victoria*. Sept 2019.
- Mobile Applications for Indigenous Language Learning. *Co-authored; presentation at the 35th Northwest Linguistics Conference*. April 2019.

Continuing Education: Cryptography I (Coursera, 2022); How to Conduct an Internal Audit Remotely (27001 Academy, 2021); Certified ScrumMaster (Scrum Alliance, 2021); Neural Networks and Deep Learning (Coursera, 2020).