Curtis Upshall

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Work Experience

Quartech Systems Ltd – Software Developer   January 2022 – Present

- Led the frontend design and development of numerous major enhancements for BC's Species Inventory Management System using Typescript and React; significantly improved the system's UI by developing advanced features previously available only through premium software licenses. Source available on GitHub.
- Deployed and tested infrastructure used for a verifiable credential proof-of-concept web app using Kubernetes.

AbeBooks Inc / Amazon Inc – Software Development Engineer Co-op   September – December 2019

- Implemented user account security features alongside new internal tools for an enterprise monolithic web app; Architected secure encryption key rotation and management with Java and AWS IAM.
- Deployed system architecture used for fulfilling data access requests under the California Consumer Privacy Act.

Redbrick Technologies / Assembly Digital – Full Stack Developer Co-op   January – April 2019

- Designed and implemented features for an internal analytics web app using React and AWS Athena.
- Developed an integration test suite for a REST API, integrating it into the continuous integration pipeline using AWS CodeBuild and CodePipeline.

FocusTime Technologies – Co-Founder, CTO   2017 – 2020

- Fully designed and built multiple iterations of an attendance web app using React, NextJS, Laravel, and MySQL, deploying infrastructure with AWS, and supporting 5,000+ concurrent users.
- Participated in numerous entrepreneurial competitions with marked success; Produced several informative client demos, marketing copy, in-depth system documentation, and product tutorials.

Languages and Technologies

Languages:	JavaScript, TypeScript, HTML, CSS, Python, PHP, MySQL, Postgres, C/C++, Java, Bash
Technologies:	React, NextJS, Server Components, SCSS, NodeJS, Jest/Mocha, Express, Redux, Laravel, jQuery, Webpack, Docker, Git, AWS, Kubernetes, Postman
Other:	Data structures, algorithm design, web design and accessibility, REST API design

Education and Certifications

University of Victoria – Bachelor of Software Engineering (BSEng)   September 2017 – December 2023

With specialization in *Data Mining and Analysis, Artificial Intelligence, and Machine Learning*

AWS Certified Cloud Practitioner (CLF-C02)

Projects

Repeat Detection Index   September 2023 – Present

- Collaborated across two universities to research, design, and implement a new algorithm for performing genome assembly on DNA datasets using C and Python/Codon. Pending publication. Source available on GitHub.

Activities and Interests

- Portrait and astronomical photography; Event videography
- Indoor and outdoor lead climbing and bouldering
- Computer-aided drafting and design; Jewelry design and manufacturing