

WORK EXPERIENCE	Jan. 2014 - Current	Brock Solutions - Transportation & Logistics Group - Software Engineer <ul style="list-style-type: none">• Created multilevel (national/airport/area) dashboards showing real time graphs, trend indicators, goal performance and active alarms.• Prototyped the initial front-end design to explore the use of React.js and D3.js libraries.• Developed server side code to clean and aggregate time series data before sending it to the front end for graphing and tabular display.• Created a bag analytics feature showing current performance overlaid with historical.• Built a passenger bag search feature to allow ad hoc searches using criteria such as bag attributes, presence at locations during time ranges, and performance characteristics.• Presented on effective code reviews an internal company summit.• Mentored new developers on refactoring code and improving code quality.
	Sept. 2012 - Jan. 2014	Brock Solutions - Corporate Group - Software Engineer <ul style="list-style-type: none">• Architected the back-end of a greenfield web-based accounting system integration using modern software practices that replaced a 10-year-old legacy system.• Validated the new system against legacy using automated integration tests using historical data to fix business logic and data import problems before going live.• Developed security layer allowing fine-grained control of editing and viewing data.• Optimized performance by adding application level caching and database indexes.• Developed senior management reports, accounting reports, project forecasting and the back-end for timesheet and expense entry features.• Created validation jobs to monitor ERP system tables for business rule violations.• Provided support during go-live for ~400 employees across Canada and the USA.• Trained and provided ongoing guidance to the maintenance team after go-live.
	Dec. 2010 - Sept. 2012	Brock Solutions - Manufacturing Group - MES Solutions Developer <ul style="list-style-type: none">• Implemented a tracking and tracing system that used real-time plant events to maintain a live view of inventory levels and records material traceability for FDA compliance.• Created ETLs and queries to offload ~75 reports to a de-normalized reporting database.• Optimized report performance by adding database indexes, setting up maintenance plans and scheduling offline report processing for long running reports.• Developed inventory management screens for mobile barcode scanners.
	May 2004 - Sept. 2009	C-Vision Limited - Electronics Manufacturing Engineer <ul style="list-style-type: none">• Led a 5-person new product integration team to develop a manufacturing process for ~150 new assemblies per year.• Redesigned the new product introduction process using lean manufacturing principles and Kanban to promote transparency and improve on-time delivery.• Created and helped implement a company-wide lead-free manufacturing transition plan.• Investigated the root causes of quality problems, test failures, and customer returns.• Assisted customers by performing design for Manufacturing reviews on designs.
TECHNICAL EXPERIENCE	Front End	JavaScript, HTML, CSS, D3.js, React.js, Backbone.js, REST, Webpack, Bootstrap,
	Back End	C#, SQL, MS SQL Server, Entity Framework, ASP.NET MVC/WebAPI, C, C++, Python, MongoDB
	Tools	Source Control (Perforce, Git), Code Review (Review Board), Automated Testing (MSTest/Tape), IDE (Visual Studio, WebStorm, Vim), Profiler (Chrome, SQL, VS)
EDUCATION	Degree	BEng. Electrical Engineering (Computer Stream) from Dalhousie University (2004)
	Continuing Education	Algorithms: Design and Analysis, Part 2 (2015), Heterogeneous Parallel Programming (2014), Pattern-Oriented Software Architectures for Concurrent and Networked Software (2013), MongoDB for Developers (2013), CID+ Certification (2008)
ACTIVITIES	Volunteering	Rotary Club of Waterloo
	Practice	Engaging in purposeful practice with small code problems and side projects on GitHub.