

Shawn Au

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EDUCATION

UNIVERSITY OF WATERLOO

HONOURS BACHELOR OF COMPUTER
SCIENCE

Aug 2017 | Waterloo, ON

UNIVERSITY OF ALBERTA

BACHELOR OF COMMERCE
Jun 2013 | Edmonton, AB

LINKS

Github: <https://github.com/s7au>

COURSEWORK

Algorithms
User Interfaces
Operating Systems
Numerical Computation of Financial
Modeling
Applied Cryptography
Distributed Systems
Intro to Artificial Intelligence
Intro to Computer Graphics
Big Data Infrastructure

PROJECTS

Wrote a ray tracer with the ability to
render images with soft shadows,
antialiasing, reflection, refraction, and
depth of field

Developed a chess program with human
and cpu player capabilities using C++

Created a web interface that fills out PDF
forms using PHP and the FPDF library

INTERESTS

Badminton
Volunteering
Bouldering

EXPERIENCE

WATCH HABITAT (CEASED OPERATIONS NOV 2019)

SOFTWARE DEVELOPER

Aug 2019 – Nov 2019 | Toronto, ON

- Watch Habitat was a streaming service with an ecommerce platform
- Developed a Gatsby application that was deployed using Netlify
- Built and deployed a serverless GraphQL API as a Netlify Lambda function
- Set up OAuth and SSO by integrating FusionAuth
- Configured and deployed a PostgreSQL database on AWS and set up database access and schema migration using Prisma2

BLOCKCHAIN MARKETS (ACQUIRED BY BITBUY DEC 2018)

SOFTWARE DEVELOPER

Dec 2017 – Aug 2019 | Toronto, ON

- Built software with a microservices architecture running on Google Kubernetes Engine with Solace messaging
- Created market states to mimic stock exchanges. This includes rejecting new orders during a closed state, allowing orders but no matches during a preopen state, and matching existing orders when transitioning to an open state using a maximal matching algorithm
- Implemented failover mechanism in microservices that are reliant on a Solace replay queue instead of the database to recover
- Built cold start mechanism in microservices to allow recovery of system from database if even Solace shut down
- Developed authentication generation system for crypto wallets to account for regularly expiring credentials
- Responsible for most database-related tasks such as structural changes, performance improvements, and migration scripts. Used Liquibase changesets to affect a PostgreSQL database.
- Set up a Squid proxy service to access external resources through a whitelisted IP. Later opted to use a NAT gateway setup using Terraform
- Set up and configured Java microservices so that they can be deployed to Google Cloud using a Jenkins pipeline
- Incorporated STOMP websockets into the application
- To prevent DDoS attacks, implemented reCAPTCHA requirement upon multiple failed logins

ACHIEVERS | INTERN SOFTWARE DEVELOPER

Sep 2016 – Dec 2016 | Toronto, ON

- Wrote backend features with PHP and MySQL, with corresponding frontend changes using Backbone.js, Handlebars.js, jQuery, and React