Chelsea Liu

✉ chelsea.liu@uwaterloo.ca
⌂ github.com/zchelseal
🔗 linkedin.com/in/zchelseal

SKILLS

Languages:
Python, C#, Javascript, C, Scheme, SQL, Bash

Data/ Math:
PostgreSQL, SQL Server, MongoDB, NumPy, SciPy

Frameworks:
.Net, Node.js, Express, Flask, Mocha, Chai, Selenium

Technologies:
Git, Jira, Linux, MacOS, AWS EC2, EB, CF, Docker, SNS, SQS, Redis, Celery

EDUCATION

University of Waterloo
B.Math. (Math Optimization)
Major: Operations Research
Minor: Computer Science
Expected August 2020

LEADERSHIP

Bayesian Case Competition
Founder & Chair
Spearheaded quantitative case competition with 200+ delegates and $13,837 sponsorship campaign

UW FARMSA
President (Intermittent)
Achieved a 245% increase in membership through events

SCHOLARSHIPS

UW Grace Hopper Scholar
Ellison Outstanding Chorister
Isabel Farrar Scholarship
President's Scholarship

EXPERIENCE

Datadog — New York, NY
Software Engineer Intern, Open Source Community — *May 2019 - Aug 2019*

- Eliminated 21-steps setup for AWS integration by implementing CloudFormation script that automatically provisions IAM roles and (serverless) Lambda functions
- Co-facilitated interactive workshops for 200+ developers with AWS; built Flask servers for deployment on EC2 and Elastic Beanstalk with Datadog instrumentation
- Added webhook-tracking features on Gello using Python (Flask), PostgreSQL, Redis

Velocia — Toronto, ON
Software Developer - Backend and Blockchain — *Aug 2018 – Dec 2018*

- Developed 3 of 5 major backend components, including dynamic reward engine, data crawler, and behaviour simulator using Node.js (Express) and PostgreSQL
- Designed decentralized identity data model following W3C's DID standard

CIBC Capital Markets — Toronto, ON
Trading Analyst, Equity Portfolio Trading — *Jan 2017 – Apr 2017*

- Automated 80% of manual index analysis through developing software to visualize and predict equity index constituents with C#, Python, SQL Server
- Built a relational database with 48 tables, optimized indices, and materialized views

Trading Assistant, Retail Block Trading — *Apr 2016 – Aug 2016*

- Built a data portal to characterize client investment portfolios and identify potential trades with C#, Python, SQL Server; resulted in greater revenue opportunities
- Streamlined data retrieval of 50,000+ rows; email and blackout alerts for 120+ clients

OPEN-SOURCE

Contributor, SciPy github.com/scipy/scipy

- Solved result discrepancy problem over different versions by increasing numerical tolerance for redundancy removal routine by a factor of 10
- Refactored linear programs in scipy.optimize; shortened one test module by 29.3%

PROJECTS/ HACKATHONS

1st Place, Ark Hackathon github.com/zchelseal/SermoNetwork

- Translation platform with Ethereum, Node.js, Solidity, React, and Web3.js
- Won 1st Place with team of 3 among hackers from across North America

1st Place, DoraHacks @ Tsinghua University github.com/zchelseal/ABC

- Transcript-sharing DApp with AES 256, smart contracts (Go), and UI (C#)

Top 8, Citadel Terminal Live @ Waterloo

- Gameplay automation algo with Python; Ranked 68 out of 13962 globally