

Ben Zhang

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EDUCATION

University of Waterloo

BS. Honors Computer Science, GPA: 3.9

Waterloo, ON

September 2015 - August 2019

- Recipient of the CIBC National Scholarship, granted to one top performer in Math and CS.

EXPERIENCE

MemSQL

Query Optimization, Software Engineering Intern

Seattle, WA

May 2018 - August 2018

- Developed sampling optimizations for the MemSQL engine, a distributed relational database. Uniform sampling from rowstore tables was improved exponentially by iterating over skiplist levels.
- Designed and implemented the Automatic Histogram Generation Framework, which gathers histogram statistics on columns for cardinality estimation, and improves query plan choices.

Citadel

Citadel Securities, Software Engineering Intern

Chicago, IL

January 2018 - April 2018

- Research and development of low latency trading technologies, using C++, Python, and RCpp.
- Citadel Securities is a global market maker across an array of fixed income and equity products.

Facebook

Applied ML, Software Engineering Intern

Menlo Park, CA

May 2017 - August 2017

- Developed features for Caffe2, a deep learning framework, powering all of Facebook's ad delivery. Caffe2 will be merging into PyTorch 1.0 for production deployment.
- Implemented compile-time optimizations such as Common Subexpression Elimination, and developed a framework which tests optimizations at run-time, only applying them if performance improves.
- For a Hackathon, created a tool in Hack/PHP which displays activity for searches of querystrings as a Heatmap. Tool is adopted by Data Science teams, the only intern Hackathon project of 2017 to ship.

Yelp

Biz Money, Software Engineering Intern

San Francisco, CA

September 2016 - December 2016

- Worked with a Python and SQLAlchemy backend, with SCSS and JS for front end development.

AWARDS

International Olympiad in Informatics, Bronze Medal

2014, 2015

International Olympiad in Linguistics, Honorable Mention

2015

Canadian Computing Olympiad, 2x Gold Medallist

2014, 2015

Jane Street Trading Hackathon, 1st place

2016 (SF), 2017 (UW)

PROJECTS AND ORGANIZATIONS

UWaterloo Undergraduate Research Assistant

Prof. Pascal Poupart, Sum Product Networks

September 2018 - Present

- Developing a PyTorch library in collaboration with UberAI, Cambridge University, and other researchers for standardizing Sum Product Networks, a powerful new Machine Learning technique.

MIT Battlecode

2nd Place, Waterloo Omega Ruby

2017

- Worked in a team of three to develop a AI which plays a real time strategy game over the course of a month. Placed 2nd over 1000+ teams, in a double knockout elimination bracket.

Waterloo ACM-ICPC

Waterloo Red (3rd team)

2015 - Present

Canadian Computing Competition

Problemsetting Committee

2015 - Present

- Working with CS professors, developed algorithmically challenging problem sets for 3000+ high school students in Canada. Gave presentations during the IOI selection camp to top 20 finishers.