

# Zhiyang (Stid) Zhang

*Computational Mathematics  
Joint Computer Science  
University of Waterloo*

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## Summary of Qualifications

- Languages: Python, JavaScript/TypeScript, SQL, C#, C/C++, R and Scheme
- Web Development: Node.js, Vue.js, Serverless, AngularJS, ASP.NET and Flask
- Technology Stacks: AWS, Visual Studio, MongoDB, Heroku and Raspberry Pi
- Familiar with agile development and have an outstanding self-learning ability

## Work Experience

- Sep. 2018 - **Trading Products Software Engineer**, *BMO Capital Markets*, Toronto, ON.  
Dec. 2018
- Core developer for web-based industry leading fixed income analysis tool
  - Created customizable real-time dashboard page based on user preference
  - Utilized websocket workload and performance for live analysis data
  - Built core rates module to access industrial clients data in OLAP cubes friendly
  - Worked with Node.js, Vue.js, Oracle database, ASP.NET, TypeScript and SQL Server
- Jan. 2018 - **Software Engineer**, *Bazaarvoice*, Austin, TX, USA.  
Apr. 2018
- Developed Serverless web application for performance analysis in Python and AngularJS
  - Collaborated with managers to build metrics for measuring team performance
  - Optimized planning process by providing visualized analysis that reflects project progress
  - Utilized ETL scripts which process project and repository data from JIRA and GitHub
  - Worked with AWS Lambda, API Gateway, Redshift and S3
- May. 2017 - **Python Software Developer**, *ARB Labs, Inc.*, Niagara Falls, ON.  
Aug. 2017
- Worked on computer vision project that recognizes casino chip values by camera
  - Wrote image and video acquiring and processing modules with OpenCV
  - Created web patching tool for data labeling with Flask and AngularJS on AWS
  - Investigated solution for color calibration, motion blur detection and image rectification
  - Also worked with MongoDB, RabbitMQ, Celery and Bash scripting
- Sep. 2016 - **Full Stack Developer**, *PerkinElmer Innovation Lab*, Kitchener, ON.  
Dec. 2016
- Used machine learning to predict maintenance schedule for lab instruments
  - Prototyped IoT systems on Raspberry Pi with real time data communication and analysis
  - Developed corresponding mobile and web HTML5 application with Ionic and Node.js
  - Worked with R, Azure, Docker and scikit-learn
- Jan. 2016 - **Investment Developer**, *Equitable Life of Canada*, Waterloo, ON.  
Apr. 2016
- Developed Flask web application for pre-trade authorization and data analysis purposes
  - Automated post-trade notification and data validation processes
  - Rewrote and utilized Python and VBA batches for financial data analysis
  - Optimized unit test module for the portfolio management system

## Education

- Sept. 2014 - **Candidate for Honours Bachelor of Mathematics, Computational Mathematics,**  
Apr. 2019 **Joint Computer Science, University of Waterloo**, Waterloo, ON, Canada.