# Hello, I'm Ben Zhao.

**University of Waterloo**
*Bachelor of Computer Science*

 wenbenz      wenbinzhao.com      ben@wenbinzhao.com      639-997-ZHAO(9426)

## Skills Summary

- 3 years of industry experience.
- Proficient in researching and exploring solutions to open-ended problems.
- Strong technical skills with data structures, algorithms, and concurrency.
- Experience with various languages and tools including but not limited to Java, Go, C++, Python, and git.
- Background in topics such as artificial intelligence and machine learning.

## Projects

**Neural Evolution of Feed-Forward Neural Networks**

- Research paper investigating neural evolution networks.
- Researched existing techniques used in structurally evolving neural networks.
- Investigated capacity for such algorithms to learn strategies and learn in real-time.
- Tested different algorithms on a simple task to observe how structures evolve.

**Big Brain**

- Used Tensor-Flow to develop a recurrent neural network to generate fake spam emails.
- Created proof of concept for AI generated text.
- Additionally, trained AI on tweets to create a tweet generator.

## Fun (I'm human, I swear!)

- Dancing
- Climbing
- Swimming
- Skating
- Dungeons and dragons
- Boardgames

## Industry Experience

**Okta—Software Engineer I**                     *01/21 - NOW*

- Implemented a system of records to store information for millions of users which may be created/updated/deleted in great volumes.
- Optimized database interactions by using pagination and chunking.
- Secured application by increasing validation to expression language engine which evaluates encoded logic from users.
- Designed permissions model to increase granularity of permission grants to resources managed by team.

**Okta—Software Engineering Intern**                     *05/20 - 08/20*

- Built pipeline to get and store data for machine learning models.
- Enhanced threat detection model to account for new features and more accurately identify malicious actors.
- Researched products and libraries to identify secure and performant ways to parse features from client metadata.

**Arctic Wolf Networks—Software Engineer**                     *09/19 - 12/19*

- Developed multi-platform agent in Go to monitor and audit computer activity.
- Agent enforces persistent firewall rules and selectively block ports and networks.
- Developed, debugged, and deployed code for distributed computing clusters with shared resources to which each agent connects.
- Updated servers to handle caching, parsing, audit processing, and managing device quarantines

**Capital One—Software Engineer**                     *01/19 - 04/19*

- Constructed a Java library to abstract graph algorithms for Amazon Neptune graph database.
- Invented patent-pending architecture for data storage and aggregation used in modelling and fraud detection.
- Applied machine-learning to model customer behavior using Python and SciKit-Learn to determine feasibility of new features.

**Imagine Communications—Full Stack Developer**                     *09/17 - 12/17*

- Refactored code to execute concurrently using JavaScript promises.
- Increased UI responsiveness by bypassing unnecessary API calls and handling simple calculations client-side.
- Optimized C# back-end services by reducing size of data being transferred.

**Acronym Software—C++ Programmer**                     *05/18 -08/18*

- Added a new classification of calculations for structural analysis in civil engineering applications.
- Optimized data structures to store and efficiently handle critical data for new calculations.