Hello, I'm **Ben Zhao.**

University of Waterloo
Bachelor of Computer Science

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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 II

01/21 - NOW

- Contributed to Okta's directory which handles the creation, storage, and retrieval of all Okta users and groups as well as their schemas.
- Improved security for users by implementing read/write restrictions based on data sensitivity.
- Made slow but time-insensitive operations asynchronous to improve UI response times and distribute system load.
- Created library to obtain metrics and gain visibility on performance and load of critical endpoints and jobs.
- Optimized database interactions by using pagination and chunking.
- Secured application by increasing validation and securing execution in the 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 endpoint 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

- Created interface for data ingestion in used in broadcasting systems.
- Refactored code to execute concurrently using JavaScript promises.
- Increased UI responsiveness by bypassing unnecessary API calls.
- Optimized C# back-end services by reducing size of data being transferred.

Acronym Software—C++ Programmer

05/18 -08/18

- Developed load simulations for application used in structural analysis.
- Optimized data structures to store and efficiently handle critical data for new calculations.