

# Adam Ding

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in /Adam Ding  
🌐 /wqding

**Languages** Golang, Python, C, C++, Java, JavaScript, SQL

**Technologies** Node.js, React, Django, Docker, TensorFlow, Git, AWS, PostgreSQL, MySQL, Firebase, MongoDB, Linux/Bash

## Experience

### Backend Developer – Sandvine

Jan. 2021 – Apr. 2021

- Implemented features in the Network Data Analytics Function (NWDAF) as defined by the 5G Core architecture using Golang.
- Multi-threaded initialization tasks to increase data collection microservice startup time by 2.5x.
- Designed and implemented workflow for tracking and managing subscriptions made towards network-functions on NWDAF.
- Developed the data access layer for Vertica and MySQL databases for the NWDAF Data Collection microservice in Golang.

### Full-Stack Developer – KnowHow

May. 2020 – Aug. 2020

- Independently built an analytics dashboard to aggregate and visualize product engagement metrics and MRR data with AWS Lambda, Chart.js, and Pycpg2.
- Implemented secure user refund and cancellation workflows on annual subscriptions with Python and the Stripe API.
- Improved product initial load time by 33% through lazy loading images, retrieving resized images using AWS Lambda and S3.

### Firmware Developer – Midnight Sun Solar Rayce Car Team

Aug. 2019 – Feb. 2020

- Designed and wrote software in C for the car's front power distribution to supply power to components, using CAN Bus for cross microcontroller communication.

### Software Engineer – DragonAgile

Sep. 2019 – Dec. 2019

- Spearheaded the development and deployment of a full stack app for the JIRA Suite using Node.js, Java, and Atlassian JS+REST APIs to protect and manage sensitive information in issues (900+ users)
- Presented auto-detected sensitive data from the Google Data Loss Prevention API for users to review and manage
- Created AES encryption pipeline using Crypto.js to securely store personal information on Atlassian's database

### Software Engineer – PointClickCare

Jan. 2019 – Apr. 2019

- Automated the processing of medical entries from the Medicare.gov API in Java
- Implemented new rules to internal Drools rule engine repository, enhancing product's ability to detect conflicts in user input

## Projects

### Neural Net Minus – [github.com/wqding/Neural-Net-Minus](https://github.com/wqding/Neural-Net-Minus)

- Programmed a neural network library from scratch, capable of generating neural networks of any configuration
- Implemented the back-propagation algorithm using stochastic gradient descent, leveraging multi-variable calculus and linear algebra concepts

### SUNify – [github.com/wqding/SUNify](https://github.com/wqding/SUNify)

- Built and trained a CycleGAN image processing model in Tensorflow to generate sunny images from cloudy images

### Productive Ambience – [github.com/wqding/Productive-Ambience](https://github.com/wqding/Productive-Ambience)

- Developed a MERN app to create custom auditory environments and boost productivity

## Education

**University of Waterloo** – Waterloo, ON, Canada  
Sep. 2018 – Apr. 2023  
Bachelor of Applied Science,  
Computer Engineering

## Fun Facts

- I am the recipient of the WCHS Male Vocalist of the Year Award
- I can eat 12 slices of pizza in 15 mins
- My max bench is 225lbs
- The bench press world record is 1,102 lbs by Paul Meeker