

# Chaoran Zhou

✉ Chaoran.Zhou@dal.ca    🌐 ranranrunforit    in Chaoran Zhou    📍 Canada    🔗 Portfolio

## PROFESSIONAL EXPERIENCE

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### Software Engineer

09/2019 – 12/2022

NCS 🔗

Beijing, China

- Use C#, .NET 4.0, Entity Framework, and SQLite to develop desktop software, ICP Expert, that feature user-friendly worksheet interfaces, easy-to-operate method development, and preset methods to simplify chemical analysis.
- Program AI based algorithms to help reduce speculation in method development and automate troubleshooting.
- Deploy a steel sample detector that is capable of processing steel sample images with glare or shadows by using Keras Segmentation models in Python and achieving a pixel accuracy of 99.8%.
- Implement and test a C# testing software for Electric Circuits and Optical Room that sends and responds data to CAN-bus Device Driver.
- Architect, design, and test a system that connects between the client software and the spark-optical emission spectrometer software used C#, .Net Framework.
- Act as the primary liaison between client and technical team with key project management tasks such as responding to client feature requests, providing training for new functionalities and understanding client business needs.

Technology Used: C#, Python, SQLite, Visual Studio, C#, .NET Framework, .NET Core, NHibernate/Entity Framework

### Data Engineer

09/2018 – 07/2019

Awesense Inc. 🔗

Vancouver, Canada

- Automated efficient, robust, and scalable big data processing solutions for utilities data.
- Designed, optimized, and troubleshoot distributed processing infrastructure using Spark and Scala.
- Developed statistical and computing methods to analyze data at the PB level. Revamped ETL processes to integrate unstructured data from multiple sources.

Technology Used: Python, SQL, Scala, Spark, Zeppelin, Google Geocode API, Google Place API, Google BigQuery, ETL

### ASP.NET/SQL Developer [Co-op]

09/2017 – 01/2018

Maritime Travel 🔗

Halifax, Canada

- Developed full-stack web app using MVC ASP.NET, C# and MySQL in a test-driven development setting.
- Improved and optimized workflow by implementing an infrastructure for the platform.
- Implemented integration with Campaigns Monitor by creating a tool that extracts JSON data from system-wide search database and provides data to the company website.

Technology Used: ASP .NET, C#, Visual Basic, MySQL, Express.js, Node.js, AWS, C, Visual Studio, SQL, SAS, MongoDB, JSON

### Software Developer - Data [Co-op]

12/2016 – 04/2017

Densitas Inc 🔗

Halifax, Canada

- Launched a breast density application to correct for rater bias on a continuous scale using Python, TensorFlow and implemented machine learning models such as SVM and Random Forest.
- Created a Data Mining models to analyze and classify electronic mammogram data using R and R Studio.
- Prototyped and implemented a new feature that allows users to match approximate strings between multiple DB.

Technology Used: Python, R, R studio, TensorFlow, SVM, Random Forest, PANDAS, SQL, NumPy, Sklearn, Deep Learning

### IT Developer [Co-op]

05/2016 – 08/2016

Government of Nova Scotia 🔗

Halifax, Canada

- Implemented a VB .NET web application that allows users to post, search and download data.
- Developed an Express.js user interface that is responsive to 60+ different user setting.

Technology Used: VB .NET, Express.js, Node.js, Microsoft Azure

## EDUCATION

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### Master of Computer Science in Data Science

01/2023 – present

University of Illinois Urbana-Champaign

Core GPA: 4.0

Champaign, USA

### Bachelor of Computer Science in Computer Science with Co-operative Education program

05/2014 – 08/2018

Dalhousie University

Core GPA: 3.67

Halifax, Canada

Specialization of Data Science

Specialization of Artificial Intelligence and Intelligent Systems

Teaching Assistant For Discrete Math & Network Computing