

Bowen Luo

Portfolio: plop.github.io

Email: bowen.luo@gmail.com

Github: <https://github.com/plop>

SKILLS

- Very experienced in object-oriented languages such as **C#, C++, Python, & Java**
 - Familiar with **C, HTML/CSS, Javascript, & Bash**
 - Experienced in **Jira** (Agile) and **Git** version control
 - Familiar with tools such as **Visual Studio, VS Code, Pycharm & Linux**
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INDIVIDUAL PROJECTS

- **Machine Learning Projects | Java & Python**
 - [Flappy Bird AI](#)
 - A playable Flappy Bird replica made with Java with the game engine Processing.
 - Instantiating and updating hundreds of neural nets simultaneously, an **evolutionary algorithm** was applied to play Flappy Bird autonomously.
 - [English Detection Neural Network](#)
 - Developed a neural network from scratch in Python using the Numpy API to illustrate the results of machine learning on language recognition.
 - Demonstrates **back-propagation** in learning algorithms using sigmoid activated perceptron layers, achieving 95% accuracy.
 - **Web Portfolio | HTML, CSS, JavaScript**
 - Designed and developed an interactive web portfolio using Javascript and the Bootstrap API to accommodate user experience.
 - Displays all aforementioned projects and more at plop.github.io.
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EXPERIENCE

- **Software Developer | Virtamove** *January 2020 - April 2020*
 - Individually developed a feature detecting compiled bitness using dynamically linked libraries and memory mappings in C++, **improving app migration success rates**.
 - Individually developed a file and registry rehosting service between matching OS in C++.
 - Worked extensively with native Windows API to query services, registries, and binaries.
 - **Junior Developer | HelloGbye** *May 2019 - August 2019*
 - Researched and prototyped improvements (GRU, ELMo, Attention layers) to an ML model using Keras and Tensorflow, **increasing natural language processing accuracy**.
 - Wrote parsers and tokenizers for JSON and natural language in C# and Python to facilitate data transfer.
 - Generated C# classes using Visual Studio's T4 text templates for dynamic parsing.
 - **Watonomous | Feedback Controllers Subteam** *January 2019 - April 2019*
 - Worked with a PID feedback control algorithm responsible for maintaining the path of the autonomous vehicle.
 - **Hack the North | Connect** *September 2019*
 - Developed on Android Studio and collaborated on a service in Java responsible for sending and receiving NDEF messages using NFC.
 - Prototyped the sending of images as URI using NFC.
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EDUCATION

- **University of Waterloo | Bachelor's of Computer Science Candidate**
 - 3.7 GPA *Expected graduation: May 2023*