Bowen Luo

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SKILLS

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

INDIVIDUAL PROJECTS

- Flappy Bird AI & Snake 2P | **Java**
  - Built user-interactive Java projects in the game engine **Processing**
  - Applied an **evolutionary algorithm** to learn to play Flappy Bird
  - Used polymorphism and input processing to instantiate neural net information and modify program state during runtime
  - Simulated classical physics in object collision and gravity to illustrate AI improvement
- English Detection Neural Network | **Python**
  - 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
- Web Portfolio | **HTML, CSS, JS**
  - Designed and developed an interactive web portfolio using Javascript and the **Bootstrap** API to accommodate user experience.
  - Displays all aforementioned and other projects at https://plopor.github.io/

EXPERIENCE

- Junior Developer | *HelloGbye* www.hellogbye.ca   *May 2019 to August 2019*
  - Researched and prototyped improvements (GRU, ELMo, Attention layers) to an existing ML model using **Keras** and **Tensorflow**
  - Wrote parsers and tokenizers for JSON and natural language in **C#** and **Python**
  - Generated C# code using Visual Studio's T4 text templates
  - Worked in an **Agile** workflow and presented in sprint plannings and daily standups
- Watonomous | *Feedback Controllers Subteam*   *January 2015 to April 2018*
  - Worked with a PID feedback control algorithm responsible for maintaining the path of the autonomous vehicle
  - Maintained the codebase on Matlab for the Feedback Controllers subteam
- Hack the North | *Connect* https://devpost.com/plopor   *September 2019*
  - Learned **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

EDUCATION

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