Ethan Lai

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Experience……………………………………………………………………………………………..

Backend Software Developer (Design 2000, Scarborough ON): *06/2021 - 09/2021*
- Collaborated with a small team to develop an **ML-powered application**
- Worked as a backend developer and the **project manager** while leading the team in the development process

Game Programmer (Other Ocean, Charlottetown PEI): *06/2022 - 09/2022*
- Collaborated with senior programmers and artists to develop gameplay mechanics for the console games, **Night Stalker** and **MediEvil**
- Used an **Agile scrum development process** to develop efficient code with useful **sanity tests** at the end of each sprint

Notable Projects………………………………………………………………………………………..

First-person RPG fighting game
- Programmed countless tools and mechanics such as a **customizable AI** with path-finding, combat behaviors, dialogue, etc.

Multiplayer-compatible Tetris
- Worked in a small team to create a Tetris battle royale game that features 2 to 5 player compatibility through **peer-to-peer hosting** and **TCP/UDP connections**

Couch Material Changer
- Built and trained a **U-Net convolutional neural network** that identifies a sofa in an image, then allows users to swap the sofa's textures
- Uses **semantic segmentation** and **neural style transfer** to accomplish this

App Updater Tool
- Using the **.NET Core** framework, developed a tool that allows developers to distribute an app that automatically updates itself by searching for a new version on an online file server (e.g., Dropbox)

Education………………………………………………………………………………………………..

University of Toronto | Computer Science Major | GIS Minor | Statistics Minor | *09/2021 - Present*

Achievements…………………………………………………………………………………………...

- University of Toronto **Honor Roll** in Mathematical and Computational Sciences (**3.70/4.00 CGPA**)
- University of Toronto Scholar Award + Entrance Award (**$13500** + conditional **$6000**)
- **Computer Science** and **Computer Engineering** Gr. 12 academic awards (Graduated with a **97% average**)

Skills……………………………………………………………………………………………………...

- Experience with **Python**, **Java**, **C#**, **C**, **R**, **JavaScript**, **CSS**, **HTML**
- Experience with **Agile methodologies** using **Git**
- Experience with **machine learning** using **TensorFlow**, **PyTorch**
- Experience with **socket APIs** to create **client and server connections**
- Experience working with **databases** such as **MySQL** and **NoSQL** in a **NodeJS** environment
- Experience with **front-end web development** with **React** and **Django**
- Advanced game development with **Unity** and modeling/animating with **Blender**