Emilie Chen

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EDUCATION

McGill University — Montreal, QC
Bachelor of Science, Computer Science — *September 2020 - May 2024*

- Participated in MAIS 202, a semester long machine learning bootcamp

EMPLOYMENT

Undergraduate Course Assistant - School of Computer Science — January 2022 - December 2022
McGill University — *Montreal, QC*

- TA'ed COMP206, introduction to software systems (Linux, Bash and C programming)
- Graded student assignments, hosted office hours and tutorials to help students better understand the material
- Answered student questions on Ed regularly

Gameplay Programmer Intern — May 2022 - August 2022
Ubisoft Quebec — *Quebec, QC*

- Unannounced project: worked on player navigation and other game play features
- Technologies: Ubisoft Anvil, C++, Perforce, Jira

R&D Software Developer Intern — May 2021 - August 2021
PreVu3D, Inc — *Montreal, QC*

- Reimplemented and optimized the mesh cut tool and improved its performance by 30%
- Integrated the new cut tool into the PreVu3D application built with Unity
- Performed unit testing with Catch2 on the new cut tool
- Integrated custom envelope constraints into Poisson Surface Reconstruction
- Technologies: C++, Unity, C#, .NET, Catch2, vcpkg, AWS

EXTRACURRICULAR ACTIVITIES AND COMPETITIONS

Team Lead & Programmer — January 2022 - April 2022
Ubisoft Gamelab 2022 — *Montreal, QC*

- Led team MCGILL-2 which consisted of eight regular members and two external musicians
- Developed "The Last Braincells" to compete in Ubisoft Gamelab 2022
- Coordinated cooperation between divisions and distribution of tasks
- Planned and managed meetings
- Implemented enemy AIs
- Improved and optimised the multiplayer experience
- Technologies: Unity, C#, Photon, Azure DevOps

PROJECTS AND ACCOMPLISHMENTS

Reverse Food Image Search | *Keras, Tensorflow, Numpy, Python, Apple Core ML, Swift*

- In a team of 3, modified and trained a Convolutional Neural Network (CNN) based on ResNet50 and achieved an accuracy of about 93% with 70 categories
- Imported the ML model into Core ML and developed an iOS app using Swift, allowing users to search the name of a food by taking a picture of it

TECHNICAL SKILLS

Programming: C++, C, C#, Java, Python, OCaml, Kotlin
Machine Learning / Deep Learning: Neural networks, Keras, Tensorflow, numpy, pandas
Tools: CMake, Maven, Perforce, vcpkg, Git, JIRA, Perforce (P4V)
Unit Testing: Catch2, NUnit, JUnit
Game Development: Unity, Unreal Engine, Blender, OpenGL, GLSL, ShaderLab