



Chuyue Zhang

Computer Engineer



+1 437-343-8066
+86 133-9713-2001



irondumpling010@gmail.com
irondumpling233@outlook.com



www.chuyue.ca
github.com/IronDumpling

Reference

Ian Kuon
Team Manager @ Intel Corp.
My team manager at Intel Corp. during my CO-OP internship.
Email: ian.kuon@intel.com

Chi-Guhn Lee
Professor @ University of Toronto
My supervisor at C-MORE Lab during my summer research internship in robotics.
Email: cglee@mie.utoronto.ca

Steve Engles
Professor @ University of Toronto
The co-supervisor of my capstone project at UofT.
Email: sengels@cs.toronto.edu

Projects

- 11/2022 - 6/2023
Backtrack (github.com/IronDumpling/Backtrack)
Environment: Unity & Visual Studio & Git
Description: A fixed-angle 3D level-based parkour game.
Responsibility: Build game data manager and save load system. Build async scene loader with animation cut scenes. Write camera switch, params adjust scripts using Cinemachine. Implement UI in modules. Craft animation FSM and control scripts of UI, characters, and sceneries.
- 2/2023
Candle Lighter (github.com/ECE496-Game-Project/Candle-Lighter)
Environment: Unity & Visual Studio & Git
Description: A 2.5D program puzzle-solving game.
Responsibility: Build a sokoban system triggered by programmable instructions. Build draggable and clickable instructions UI. Implement grid map player controller using input system. Implement animation controllers and VFXs of objects. Build text information collection system.
- 7/2023 - Present
Wave Optics Education Website (ece496-game-project.github.io)
Environment: Unity WebGL & Visual Studio & IntelliJ IDEA & Git
Description: A website simulates phenomena. Teach students the knowledge of wave optics.
Responsibility: Implement physics simulation algorithms of wave, polarizer. Implement MVP in C# and JavaScript for multiple models using reflections, events, and JSON. Implement free-perspective navigation editor feature such as zoom, rotate and translation.
- 5/2023 - 8/2023
Over-clock Survivor (github.com/IronDumpling/over-clock-survivor-3d)
Environment: Unity & Visual Studio & Git
Description: A 3D survival game inspired by "Vampire Survivor" and "Backpack Heroes".
Responsibility: Implement functionalities of player and enemies using MVC. Craft enemy AI using FSM. Implement inventory tetris backpack system. Use raycast and graph theory to design weapon triggering algorithm. Implement danmaku control system. Dynamically control enemies' difficulty.

Work Experiences

- 5/2023 - 8/2023
Research Intern @ C-MORE Lab
Environment: PyCharm & Google CoLab & Gazebo & ROS2 & Ubuntu & Git
Responsibility: Research multi-robot exploration tasks in unknown areas using reinforcement learning and Bayesian optimization, determining the optimal robot configuration. Testing model effectiveness using physical simulation software like Gazebo.
- 5/2022 - 6/2023
Software Engineer @ Intel Corp.
Environment: VS Code & Heidi SQL & Perforce
Responsibility: Responsible for developing a website and tools for analyzing and comparing chip data models and actual chip data using Python. Utilizing tools such as Pandas and PostgreSQL for database processing.

Education

- 2019, 9 - 2024, 5 - Toronto, ON, Canada
University of Toronto
Bachelor of Applied Science and Engineering In Computer Engineering
CGPA (2019 - 2023): **3.75** / 4.0; **AGPA** (2020 - 2021): **3.91** / 4.0
Dean's Honour List: 4 semesters

Skills

| Programming | | Knowledge | |
|-------------------------|--|----------------------------|---|
| C/C++ | Familiar with software & OS programming | Data Structure & Algorithm | Score: 91/100 A+ |
| C# | Familiar with game and algorithm programming | Computer Graphics | Score: 94/100 A+ |
| Python | Familiar with data processing and machine learning | Computer Network | Score: 87/100 A |
| HTML & CSS & JavaScript | Familiar with web frontend programming | Game Engine | Familiar with usage of Unity |
| | | Operating System | Familiar with concurrency, virtualisation and file system |
| | | Version Control | Familiar with Git & Perforce |