

William Ma

3A Software Engineering

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EXPERIENCE

BDA ENTERTAINMENT | WEB/MOBILE DEVELOPER

September 2015 - December 2015 | Mississauga, ON

- Designed and developed **entire live chat system** in C# and Javascript using SignalR library, which uses websockets, and downgrades to other methods of communication when websockets are unsupported
 - Used extensively from **all players** in the game, with over **10000 messages** sent **every day**
 - Features emojis, BBcodes, anti-spam prevention, word filter, and blocking/unblocking capabilities
 - Extremely smooth UI with **draggable** and **resizable** chat windows, a users list, and **seamless loading** of older messages

BDO SOLUTIONS (FORMERLY SYSTEMGROUP CONSULTING INC.) | SOFTWARE CONSULTANT

May 2014 - August 2014 / January 2015 - April 2015 | Mississauga, ON

- Optimized** daily job calculations making them run up to **50%** faster using SQL stored procedures combined with C#
- Refactored and reduced **thousands** of lines of code using reflection and extension methods
- Applied **styling to entire website** which resulted in great feedback from the client
- Developed an easy-to-use framework for creating user-friendly forms

SKILLS

LANGUAGES: C# , C++, C, JAVA, JAVASCRIPT, HTML, CSS, SQL, PYTHON

LIBRARIES & FRAMEWORKS: JQUERY, ASP.NET MVC, SIGNALR, ENTITY FRAMEWORK, ANDROID SDK, PHASER

OTHER: WEBSOCKETS, AJAX

PROJECTS

WAR | WEB GAME

[Link](#) | HTML, CSS, JavaScript, Phaser

- 2D top-down shooter where you battle with up to 3 other players and a computer inside an arena
- Features **randomly generated maps** and an **AI** that uses clearance-based pathfinding to chase the closest player

HISTORY GRAPH | CHROME EXTENSION - 24 HOUR HACKATHON (TEAM OF 3)

[Link](#) | HTML, CSS, JavaScript, chrome.history API, D3

- Creates a history tree of all links traversed in a page's lifetime for a better navigation than the back/forward buttons
- Developed backend for saving urls, and retrieving them to display in the tree, as well as some UI elements using d3.js

FIND THE COUNTRY | WEB GAME - 24 HOUR HACKATHON (TEAM OF 4)

[Link](#) | HTML, CSS, JavaScript, Google Maps API

- Given a country name, scroll through the map of the world and try to find the country
- Implemented core game logic using Google Maps Geocoder and Markers

GREED: DODGE GAME | ANDROID APPLICATION

[Link](#) | Java, Android SDK, Google Play Services

- Collect coins while avoiding cannonballs bouncing on the screen
- Features a shop to buy upgrades and skins, **45 achievements**, and over **100 individually drawn images**

EDUCATION

CANDIDATE FOR BACHELOR OF SOFTWARE ENGINEERING | UNIVERSITY OF WATERLOO

September 2013 - present | Waterloo, ON

- Developed compiler in C++ to compile WLP4 code (subset of C code)
- Programmed Scribbler Robot in Python to navigate past any obstacle and return to its original position
- Top 10%** of class since year 2 with cumulative average of **89.33%**