UBC Science Co-op

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Oleg Yurchenko

Year 2, Computer Science Major

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TECHNICAL SKILLS

- **Programming Languages:** C++, C, Java, Python, JavaScript, PHP, Dart, R*.
- **Libraries & Environments:** Godot, Java Swing, SDL, SFML, freeGLUT, LAMP stack.
- **Technologies & Software:** Git, GitHub, Visual Studio, Visual Studio Code, IntelliJ, JUnit, Vim*, GCC*, Clang*, CMake*

  ** currently acquiring*

TECHNICAL PROJECTS

Aim Trainer *Academic Project* January, 2022 – March, 2022

- Created an aim trainer with Java Swing featuring multiple game modes and stat tracking.
- Adapted a robust test suite that tests the program thoroughly using JUnit.
- Added a responsive graphical user interface. The target can move, change size, and change color independently. The game's menu and bounds for the targets are responsive with respect to the size of the window.
- Developed a save and load feature that reads and writes locally to the user's machine. Prompts the user to save before exiting, and load on startup. Stores and retrieves data using the JSON format.
- Implemented multi-threading to update the graphics in real time whilst not delaying the timer.

Tower Defense Game *Personal Project* March, 2021

- Developed a roguelike tower defense game using Ubisoft's NEXT API in C++.
- Used the freeGLUT library along with Ubisoft's custom library to handle mouse and keyboard input, and visual output.
- Adopted a phase-state approach where events are handled in phases during the main update function. First, map generation, then turret placement, and finally enemy release.
- Implemented multi-round player health retention and procedural map generation, that gets progressively more complicated.
- Devised multiple enemy and turret types which are unlocked upon reaching higher rounds.

Arcus *Hack the North 2020++* January, 2021

- Worked in a team of 4 to create a cross-platform mobile application that generates a four-color palette based on a given image in under 48 hours.
- Interacted with the Unsplash API to let the user search the Unsplash image database for an image.
- Used the Google Cloud Vision API to analyze an image's colors, and use the 4 most prominent ones as the palette.
- Accessed user storage features to generate a palette based on an image stored locally on the user's device.
- Implemented a local database to be able to save and name favorite color palettes, and look them up even after closing the application.
- Devised an idea to refresh expired keys using HTTP requests to a central PHP server which enabled users to not have to log in every 30 minutes.

VOLUNTEER EXPERIENCE

Recess Hacks Toronto, ON

Head Hackathon Organizer March, 2021 – June, 2021

- Supervised 12 high school students to organize a hackathon aimed for high school students in the Greater Toronto Area.
- Involved in static website development and sponsorship outreach, along with guiding my peers in other sections of the planning.
- Garnered over CAD$8000 worth of prizes from sponsors.
- Guided and assisted students in submitting 12 projects among 37 participants.

EDUCATION

University of British Columbia Vancouver, BC

Bachelor of Science (BSc.) – Major in Computer Science; Grade: 87.2% September, 2021 – April, 2026

OTHER SKILLS

Languages: Fluent in Russian. Intermediate in French. Beginner in Japanese.

Hobbies and Interests: Video Games, Hockey, Machine Learning, Circuitry.