TOBY TOMKINSON

Computer Science Graduate

@ tobytomkinson@hotmail.co.nz   📞 027-239-5676   📍 Auckland, New Zealand   in toby-j-tomkinson

⌨ ttom795   🌐 ttom795.github.io

TECH SKILLS

Programming Languages:

Python · C# · C++ · JavaScript · SQL · Java · LaTeX

Web Development:

MongoDB · Express.js · React · Node.js · TypeScript · HTML · CSS · Vite

Software:

Microsoft Office · Git & GitHub · Google Workspace · Nagios · Unity Engine · Mono · .NET · Unreal Engine 4 & 5

Operating Systems:

Windows · OSX/MacOS · Debian · Ubuntu · ArchLinux

Development Methods:

Agile · Scrum · Kanban · Waterfall · Pair Programming

CERTIFICATIONS

Red Cross Comprehensive First Aid · ICDL Certified

Certificates of Outstanding Achievement ("A" Grade) in:

- Capstone: Computer Science
- Cyber Security
- Data Communication Technologies
- Computer Graphics and Image Processing
- Human-Computer Interaction
- Object Oriented Software Development
- Computer Organisation
- Data Communication and Security

3-year GPA: 7.566

SOFT SKILLS

Attention to Detail · Quick Learner · Adaptability · Multitasking Abilities · Effective Communication · Teamwork and Collaboration · Time Management · Creativity

ABOUT ME

I am a hardworking, reliable, and motivated individual with a strong computer and technology-oriented background. I thrive in environments where I am exposed to a variety of experiences and challenges, embracing the diversity of perspectives that come with them. My desire to improve myself extends beyond my professional self and is central to my identity.

With 4 years of experience with Python, C# and C++, I have a solid foundation as a developer, and from 2020, the university introduced me to Java, SQL, and web development tools like MongoDB, Express.js, React, Node.js, and TypeScript (to name a few).

EXPERIENCE

Receptionist | University of Auckland

📅 Nov 2022 – Current   📍 Auckland, New Zealand

- Managed front-desk and general accommodation operations - from resident queries to introduction of new processes and workflow streamlining.
- I have implemented automated systems to streamline the recording of resident lockouts and issuance of temporary access cards, improving efficiency.

Graduate Teaching Assistant | University of Auckland

📅 Feb 2022 – July 2023   📍 Auckland, New Zealand

- Provided tutoring, graded assignments/tests and provided constructive feedback through evaualion for COMPSCI 215 and COMPSCI 315.
- I created a useful program bridging Dividni and Canvas to automate formatting and delivery of of marks.

Research Assistant | University of Auckland

📅 Nov 2021 – Feb 2022   📍 Auckland, New Zealand

- Worked with Dr. Ulrich Speidel.
- I developed software and a novel routing algorithm for use with Low Earth Orbit satellites (available here) using the Unity Real-Time Development Platform.

Research Assistant | University of Auckland

📅 Jun 2021 – Oct 2021   📍 Auckland, New Zealand

- Worked with Dr. Alex Shaw.
- I developed a procedural construction site for Virtual Reality-based risk assessment training for City Rail Link using the Unity Real-Time Development Platform.

C++ Developer | Beyond Studios

📅 Nov 2019 – Current   📍 Remote, United States

- Responsible for gameplay design, developing game systems using C++, designing gameplay mechanics and optimising code.

Sales Assistant | Jaycar New Lynn

📅 Nov 2020 – Mar 2022   📍 Auckland, New Zealand

- Managed clients' needs and budgets to an exceptional level and developed strong company relationships through repeat customers.

Software Developer | Gladstone Games

📅 Feb 2017 – Current   📍 Remote, United States

- Responsible for ensuring a good user experience and gameplay balance, optimising code, implementing asynchronous scene/object/player instantiation and loading, and designing level layouts.
- I have multifaceted role that involves both game design concepts and C# development - generally contributing to both the creative and technical aspects of the team.

EDUCATION

Bachelor of Science | University of Auckland

📅 Feb 2019 – Jun 2022   📍 Auckland, New Zealand

Bachelor of Science (BSc) majoring in Computer Science.

Bachelor of Science (Honours) | University of Auckland

📅 Jul 2022 – Jun 2023   📍 Auckland, New Zealand

Bachelor of Science Honours (BSc Hons) majoring in Computer Science.

My dissertation explored a novel pathfinding algorithm for Low Earth Orbit satellite networks - an improved version of my project done as a research assistant in 2022. The honours degree included coursework, a dissertation as well as the simulation software developed in Unity Engine using C#.

PERSONAL PROJECTS

Low Earth Orbit Satellite Simulator | 🌐 | Unity Engine & C#

Simulates and visualises approximate great circle routing in Low Earth Orbit satellite networks. This project was iterated on for my dissertation.

Hero Academia: Beyond | 🌐 | Unreal Engine & C++

As a game designer and programmer for "Hero Academia: Beyond," I designed gameplay mechanics, interactive environments, and ported the game from desktop to mobile with full gameplay, rendering and post-processing functionality.

Orangutan Monitor | 🌐 | C++ & OpenGL

A standalone software application designed to monitor page-file size efficiently, useful when paired with memory-intensive programs like Yuzu. This tool comes as a single .exe file without the need for additional dependencies or DLLs.

Chippure | 🌐 | Python

Chippure is a Python-based Chip-8 emulator developed using Python's default libraries. It emulates the Chip-8 system and allows users to play Chip-8 games on modern hardware, and demonstrates the effectiveness of Python's default libraries in building emulation software.

Various Games | Unreal Engine & C++

- 🌐 | Showcase - Shonen Jump Game
- 🌐 | Showcase - My Hero Karting
- 🌐 | Showcase - Shield Hero Fangame
- 🌐 | Showcase - Mob Psycho Sentiment