



TOBY TOMKINSON

Developer & Computer Science Graduate

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TECH SKILLS

Programming Languages:

Python C# C++ JavaScript

SQL 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

SOFT SKILLS

Attention to Detail Quick Learner

Adaptability Multitasking Abilities

Effective Communication

Teamwork and Collaboration

Time Management Creativity

LANGUAGES

English: Native

German: Conversational

Vietnamese: Beginner

Japanese: Beginner

ABOUT ME

I am a hardworking and reliable individual with a strong computer and technology-oriented background. I thrive in environments where I am exposed to a variety of experiences and challenges and I have a strong desire to constantly improve myself.

With 4 years of experience with Python, C# and C++, I have a solid foundation as a developer. From 2020, the university introduced me to JavaScript, SQL, and web development tools including MongoDB, Express.js, React, Node.js, and TypeScript.

EXPERIENCE

Administrative 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 evaluation for COMPSCI 215 and COMPSCI 315.
- I created a useful program bridging Dividni and Canvas to automate formatting and delivery 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.

REFERENCES

Available on request

MOST PROUD OF



Academic Results

I've received no marks below an A grade for the last 3 years of my study with a final GPA of 8.122/9 or 3.8/4.0



Dissertation Completion

I developed a novel satellite routing algorithm for Low Earth Orbit satellite networks as the focus of my dissertation. This not only received high praise from my academic mentors but also an A+ grade from the University of Auckland.



Volunteer Staff - Burnett Foundation Aotearoa

I take great pride in my volunteer work at the Burnett Foundation Aotearoa, where I help package condoms for distribution, contributing to their mission of promoting safe practices and HIV prevention.

HOBBIES



Gaming

Avid fan of RPG games. Currently working my way through *Baldur's Gate 3*.



Exercise

I'm a regular gym-goer and a Muay Thai amateur. I'm a firm believer of the adage "a healthy body is a healthy mind".



Reading

I love adventure novels and comedy - Terry Pratchett, Douglas Adams, and Bill Bryson for example.

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, 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, 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