

# Vic Roberts

Email: [victrobe@outlook.com](mailto:victrobe@outlook.com) | Website: [aplysiida.github.io](http://aplysiida.github.io)

## About Me:

Honours student studying computer graphics at VUW interested in data visualization, computational mathematics and performance-oriented graphics.

## Education:

- **Victoria University of Wellington, School of Engineering and Computer Science**
- Bachelors of Science in Computer Graphics with Honours  
*February 2022- Present(Finishes June 2023)*
- Bachelors of Science in Computer Graphics (major) and Mathematics(minor)  
*February 2019 – November 2021*

## Technical Skills:

- Languages:
  - C, C++, C#, Objective-C, Java, Python
- Scripting:
  - Lua, Powershell
- Graphics APIs:
  - DirectX12, Metal, OpenGL, Unity
- Game Engines:
  - Unity
- 3D Software:
  - Blender, Autodesk Maya
- Data Science/Machine Learning:
  - DEAP, PyTorch
- Worked in the following platforms:
  - Linux(AlmaLinux, Ubuntu), Windows, macOS

## Professional Experience:

### • Research Assistant

*Computational Media Innovation Centre, VUW, Wellington, NZ (February 2023 – Present)*

- Worked with a team of researchers and development staff to develop Unity project that utilized LiDAR data streamed from sensors in real time.

### Summer Scholarship/Research Assistant

- *Computational Media Innovation Centre, VUW, Wellington, NZ (November 2022 – February 2023)*

- Worked with view synthesis paper's authors to develop a framework in Unity using C# to survey performance of paper's algorithm's output.
- Kept researchers constantly updated with project status with weekly presentations.

### • Tutor

*Victoria University of Wellington, Wellington, NZ (July 2020 – November 2022)*

- Assisted university lecturers with engineering and computer science courses.
- Supervised help-desks assisting students with course topics and assignments and supervised tutorials which revised content of course.
- Course topics included programming in C/C++, programming using OpenGL and implementation of algorithms and data structures in Java.

### Summer Scholarship/Research Assistant

- *Computational Media Innovation Centre, VUW, Wellington, NZ (November 2021 – February 2022)*

- Investigated background research done for feather structure and geometry generation, which was summarised into a literature review for key researchers of project.
- Developed Autodesk Maya plug-in using C++ to generate feather structure with parameters that update in real-time.
- Summarised plug-in's features development into report and presentation at end of scholarship.

### • Research Assistant

*Victoria University of Wellington, Wellington. NZ (November 2020 – February 2021)*

- Worked on Moth, an experimental interpreter for programs written in the Grace language.
- Worked in a team of developers and researchers in implementing new features and improving software management of interpreter(improving building process, introducing new tests, adding documentation).

## Communication and Interpersonal Skills:

- Course tutoring for computer science courses leading other tutors and students.
- Writing reports and presentations about research software.
- Collaborating with researchers based in artificial intelligence, computer graphics and programming languages.

## Additional Experience:

- **Hack to the Future ChatGPT Hackathon**  
(May 2023)
  - Participated in the Hack to the Future ChatGPT Hackathon hosted by Provoke Solutions in Wellington.
  - Worked with a team of 5 developers to develop website in 2 days that uses ChatGPT and LangChain to analyse and summarise git logs and public emails of team members.
  - Responsible for prompt engineering and back-end development using Python.
- **SPLASH 2022 Student Volunteer**  
(December 2022)
  - Collaborated with sessions' chairs, other student volunteers and conference organizing committee to ensure conference of 500 participants from around the world went smoothly.
  - Helped set up technology to assist both offline and online participants and assisted with technical issues during talks.
  - Assisted with editing and uploading recorded talks onto ACM SIGPLAN Youtube channel.
- **Pacific Graphics Student Volunteer**  
(October 2021)
  - Helped organisers with running the flagship conference of the Asia Graphics Association, which was virtual in 2021 due to COVID-19.
  - Supervised and coordinated online talks(both live and pre-recorded) as a session assistant
  - Supervised online information desk to help guide conference participants.

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References available on request