Phuc Nguyen

phuc-nguyenn.github.io/ github.com/Phuc-Nguyenn

Education

University of Adelaide

Bachelor of Mathematical and Computer Sciences (GPA: 6.75/7.00)

• Relevant Coursework: Object Oriented Programming (HD 92), Mathematics IA and IB (HD 97), Statistical Analysis and Modelling (HD 94), Matlab and C (HD 94), Financial Modelling III (D 80)

Glenunga International High School

South Australian Certificate of Education (ATAR 99.35/99.95) **Professional experience**

Topcon Agriculture | Software testing intern

- Accomplished the automation of a regression testing process for farm equipment apps using Squish and Python scripting, replacing the need for manual testing which streamlined the entire testing process by 95%.
- Accomplished the preparation of hardware by mounting proprietary operating systems on twenty SD cards that were distributed to clients, alleviating workload for senior engineers and liberating company time and resources.

Mathematics tutor | Mathematics tutor for high school students

- Accomplished developing good study habits and learning techniques in all three students, measured by a rapid improvement through multiple grade bands and up to A+.
- Consistent student performance was enabled by placing heavy emphasis on conceptual understanding and problem solving rather than memorisation.

Projects

Agriculture Game | C++, SFML

- Accomplished the development of a farm management system in a farm simulator game using object oriented programming principles.
- Orchestrated the project's structural design, leveraging prior experience with graphics to work with C++ SFML graphics library.
- Demonstrated astute decision-making by assessing project scope, time constraints, and the importance of showcasing specific concepts for the final result of 100%.

Height map viewer | Matlab

- Successfully developed a wire frame height map viewer using Matlab that enabled viewing of topographical data from regions including the Himalayas, and various other mountain ranges.
- Optimised the program by utilizing **Bresenham's line algorithm** which avoided floating point arithmetic, speeding up frame load times by 3x when compared with the naive and Matlab-provided line drawing function.

3D Ray Caster | *C*, *Minilibx*

- Developed a 3D ray caster program in C using the Minilibx graphical library as a passion project for exploring 3D computer graphics.
- Instrumented the rendering of coloured objects and realistic looking shadows from a dynamic camera's perspective by self-implementing low-level vector calculations such as normals and intersections.

Skills and Technology

Programming Languages: C (Proficient), C++ (Proficient), Matlab (Proficient), Python (Novice), R (Novice) Technologies: Squish, Linux, SFML, Excel, Git

Concepts: Object oriented programming, algorithms, data structures, linear algebra, differential equations, statistical modelling, hypothesis testing, probability

Community Involvment and Volunteering

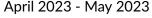
Competitive Programming Club (Adelaide University): 5th place out of 34 teams in South Australia South Australia Judo State player : bronze -66kg Australia Nationals 2023

Volunteer Judo Coach: Volunteer judo coach at the Adelaide University Judo Club, +80 juniors, +50 adult members Committee member for Adelaide University Judo Club: club admin tasks, committee meetings, events organising University Blues Award 2023: Awarded for significant service to a University sporting club and sporting achievement

Jan 2023 – Ongoing

Aug 2023 - Sep 2023

Dec 2022 - Jan 2023



Adelaide, South Australia

Expected Nov 2025

Adelaide, South Australia

Graduated Nov 2022

Nov 2023 – Jan 2024