

# Phuc Nguyen

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## Education

### University of Adelaide

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

Expected Nov 2025

Adelaide, South Australia

- **Relevant Coursework:** Calculus, Linear Algebra, Differential Equations, Statistical Modelling, Hypothesis Testing, Probability, Algorithm and Data Structures (C++), Object Oriented Programming (C++)

### Glenunga International High School

South Australian certificate of education (ATAR 99.35/99.95)

Graduated Nov 2022

Adelaide, South Australia

- **Subjects:** Specialist Mathematics, Mathematical Methods, Physics, English, Research Project (merit)

## Professional experience

### Topcon Agriculture

Software testing intern

Nov 2023 – Jan 2024

Adelaide, South Australia

- Automated the regression testing process of in development applications using Squish and Python scripting
- Replaced the need for slow manual testing speeding up the regression tests by 95%
- Mounted tailored operating systems on 20 SD cards that were distributed to clients and internally

### Mathematics tutor

Local mathematics tutor for high school students

Jan 2023 – Ongoing

Adelaide, South Australia

- Delivered personalised one-on-one tutoring sessions to high school mathematics students
- Placed heavy emphasis on conceptual understanding and problem solving rather than memorisation
- Brought under performing students to the A and A+ grade bands by identifying clear areas for improvement.

## Projects

### Agriculture Game | C++, SFML

Aug 2023 - Sep 2023

- Spearheaded a team project focused on developing a farm management game using object oriented programming principles
- Orchestrated the project's structural design, leveraging prior graphics and library experience to construct the code base's framework
- Demonstrated astute decision-making by assessing project scope, time constraints, and the importance of showcasing specific concepts.

### Binomial Pricing Model for Call and Put options | C++

Jul 2023 - Aug 2023

- A C++ implementation of the backward-induction pricing formula for determining rational premiums of put and call options in a Cox-Ross-Reubenstein market model
- Applied financial mathematical concepts taught from UoA Course MATH3002 Financial Modelling: Tools and Techniques

### 3D Ray Caster | C, Minilibx

Dec 2022 - Jan 2023

- 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 shadows from a camera's perspective by self-implementing low-level vector calculations such as normals and intersections

## Skills and Technology

**Programming Languages:** Proficient in C, C++, Matlab – Novice in Python, R

**Technologies:** Squish, Linux, SFML, Excel, Git

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

## Community involvement and volunteering

**Competitive Programming Club (Adelaide University):** 5th place out of 34 teams in CPC 3/2/2024

**South Australia Judo State player :** (bronze -66kg Australia Nationals 2023)

**Judo Coach:** Volunteer judo coach at the Adelaide University Judo Club, +80 juniors, +50 adult members