Phuc Nguyen

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Education

University of Adelaide Expected Nov 2025
Bachelor of Mathematical and Computer Sciences (GPA: 6.75 / 7) *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 Graduated Nov 2022
South Australian certificate of education (ATAR 99.35/99.95) *Adelaide, South Australia*

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

Professional experience

Topcon Agriculture Nov 2023 – Jan 2024
Software testing intern *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 Jan 2023 – Ongoing
Local mathematics tutor for high school students *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 identify strengths and 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 involvment 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