

# Luong Johnny Nguyen

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## EDUCATION

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### The University of New South Wales (UNSW)

- Bachelor of Engineering (Honours) in Mechatronic Engineering 2021 - 2025 (Expected)
- Bachelor of Science in Computer Science 2021 - 2025 (Expected)

## EXPERIENCE

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### Undergraduate Systems Engineer, Sunswift UNSW

- Collaborated with 90+ students to build and test a solar car 2023 Feb - 2023 Dec
- Managed the development of projects throughout the design lifecycle ensuring adherence to project timelines and specifications
- Ensured compliance with Australian road regulations and industry standards
- Coordinated with various departments to facilitate seamless integration of components and systems

## PROJECTS

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### 2 DOF Robotic Arm with Gripper Controlled by Hand Motions

- Designed and built a 2 degrees of freedom robotic arm using cardboard, capable of grasping light objects
- Utilised OpenCV for hand motion detection, Python for programming and basic electronics for motor control.
- Planned and researched alternative methods for closing the gripper, successfully implementing a string-based mechanism instead of gears to achieve precise movement.

### Tutor Management App, Major Assignment, COMP3900

- Developed a tutor management app using ReactJs and Firestore with 4 other students
- Designed front-end using HTML, CSS, ReactJS and Material UI
- Collaborated with back-end members to integrate and test components
- Utilised Agile methods and Jira to set and meet sprint goals

### Maze Solving Robot, Major Assignment, MTRN3100

- Constructed an Arduino self-driving maze-solving robot with a team of students
- Implemented PID control algorithms to increase precision
- Employed computer vision techniques to generate an efficient path
- Performed rigorous testing and iterative design to enhance performance and reliability

## SKILLS

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- Proficient in Java, C++, JavaScript, HTML/CSS, Python
- Solidworks, OpenCV, ReactJs