

# Habib Aghasafari

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Please visit [habib.aghasafari.com](http://habib.aghasafari.com) to view my robotic projects.

## EDUCATION

Feb 2015 – Present

**University of Technology Sydney** — Bachelor of Engineering (Honours),  
Diploma in Professional Engineering Practice  
Graduation: June 2021

Feb 2014 – Dec 2014

**TAFE WSI, Blacktown NSW** — Certificate IV in Tertiary Preparation  
Course (TPC)  
Completed in December 2014

## ACADEMIC AWARDS

December 2014

Statement of Excellence for achieving first place in the Certificate IV in  
Tertiary Preparation Course, the subject of ANALYSE CHEMICAL  
PROCESSES In the state of New South Wales.

## SKILLS

See my skills in action by visiting my website at [habib.aghasafari.com](http://habib.aghasafari.com)

### Programming Languages:

C, C++, Python, MATLAB, Ladder logic, C#, JAVA, HTML, Small Basic

### Technical Skills:

- Expert in Robot Operating System (ROS)
- Expert in robot arm forward and inverse kinematics and collision avoidance
- D-H kinematics models and simulations in Gazebo and MATLAB
- Advanced Computer vision and image processing with MATLAB and OpenCV
- Simultaneous Localisation and Mapping (SLAM)
- Advanced robotic path planning and sensor fusion
- Robotic simulations and CAD design in Gazebo
- Sensory data visualization in RVIZ
- Neural Network design and machine learning training algorithms
- Design and deployment of Convolutional Neural Network (CNNs)
- Linux operating system
- GIT software development environment
- CMAKE and Catkin software development

- Unit testing
- Object-Oriented Programming (OOP)
- Arduino projects (wiring, design and coding)
- CPLD and Logic programming
- PLC programming in ladder logic
- Control Systems Design such as PID control design

#### **Interpersonal Skills:**

- Excellent communication skills
- Reliable and punctual
- Fast learner and adaptive to new environments and roles
- Curious and enjoys learning new skills
- Excellent teamwork and can work very well in team environment
- Leadership
- Autonomous personality and self-starter
- A creative problem solver

#### **Other Skills:**

- Video editing in Adobe Premiere Pro
- Web development
- Game development
- Electrical design
- Battery management system
- Counter-balance and high-reach forklift driver

### **LICENSE AND QUALIFICATIONS**

- Certificate IV in Tertiary Preparation Course (TPC)
- NSW Working With Children Check (WWCC)
- High-Risk Work LF forklift license
- White card
- First aid certificate (HLTAID003)
- Certificate II in Security Operations
- Full driver license

## **WORK EXPERIENCE**

Jan 2020 – Present

Casual work as a code instructor at Junior Engineers. I teach C, Python, Arduino and scratch workshops to children aged between 9 and 17.

Jul 2017 – Dec 2017

Full-time work as Intern Electrical Engineer at Caspian Technology Pty, Lt. Conducted product design and assembled electrical products such as power supply & battery management systems, fire management control systems, LED "Exit" signs for buses among many other projects. Also assisted with inventory management, warehousing and administrative duties. Operated High-Reach forklift.

Nov 2015 - Jun 2016

Full-time work as a process operator at PANDROL, conducted Process working on multiple production lines at once, prepared raw materials, performed hourly quality check measurements. Wrote reports and performed labelling, packaging, general warehousing and forklift operation.

## **REFEREES**

Available upon request