

# JAKE LORKIN

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## PROFILE

Results orientated individual with a passion for robotics engineering, a high level of drive and a strong ability to accomplish objectives. Possesses good interpersonal skills and an adaptable personality that serves well in negotiating challenging situations, whether working individually or as part of a team. I pride myself on my ability to learn and adapt quickly to any task, and always get the job done.

I have been tinkering with electronics in my room for as long as I can remember, and while my bedroom is still a robotics lab. I have moved on to designing, inventing, and tinkering in workshops and labs for an ever-growing range of companies.

## SKILLS AND INTERESTS

- Embedded systems programming; low level programming of microcontrollers and construction of logical discrete circuits.
- Experience in workshops and with power and hand tools such as: Lathes, drills, welding, CNC milling.
- CAD modeling and design. Using software such as Autodesk Inventor & Fusion 360.
- Accomplished programmer comfortable in a range of languages: C++, C, Java, Python, Linux bash, HTML,
- Professional PCB design and assembly: RF circuitry, power electronics, robot control.
- Avid long-distance jogger and rock climber.
- Teamwork and organization, both as a leader and member.

## WORK EXPERIENCE

09/2016 – 04/2019

**SERVICE EMPLOYEE**, COLES, AUS

Part time job at Coles; Responsibilities included: customer service, organizational and cleaning work. Worked in both service (serving customers at the checkout and handling money) and meat departments.

11/2018 – 12/2018

**INTERNSHIP**, FUTURE AUTOMATION, UK

Internship at Future Automation; Responsibilities included: electrical and mechanical work, circuit board assembly/soldering and assembling mechanisms and respective wiring.

11/2019 – 03/2020

**SERVICE EMPLOYEE**, POOLWERX, AUS

Part time job at Poolwerx Hillarys; Selling chemicals and pool parts to customers, providing technical knowledge and advice to customers about pools their problems.

07/2020 – 02/2022

**SALES ASSISTANT**, ALTRONICS, AUS

Part time job at Altronics; On the sale floor selling electronic components to both trade and regular customers. Solving customers problems, learning, and cataloguing a range of components. Gained a large amount of electrical knowledge about usage of a variety of electrical components. As well as conversing with many industry professionals.

06/2021 – PRESENT

**ENGINEERING OUTREACH OFFICER, UNIVERSITY OF WA, AUS**

Started and mentored a robotics team of high school students at UWA through the FIRST Robotics Competition program. Spent a few months mentoring, designing, and building a 60kg robot to compete over in Sydney.

Tutored electrical engineering labs, teaching fellow university students programming and electronics. Marking projects and assisting in running units.

06/2021 – PRESENT

**ENGINEERING CONSULTANT, SELF-EMPLOYED, AUS**

After undertaking jobs for a number of different clients as a freelance consultant I decided to begin my own business. Lorkin Consulting. Through this business I have completed a variety of different projects, working with different companies from small to large.

**LORKIN CONSULTING** – Project Examples:

These examples and more can be found on my own made and hosted website

[www.lorkin.cc](http://www.lorkin.cc)

- **Raptor Module:** Developed with CrimeScan Research Solutions the Raptor Box or Module is a drone mounted mobile tele-communications tower. Developed for government agencies for search and rescue, and security applications. See <https://raptorbox.com.au/> for more info.



- **SMS and GPS Boat Alert System:** Developed for a client to satisfy insurance company safety requirements, the system was installed on a boat and sent an SMS to the user if boat had taken on too much water. The system also tracked the boats GPS coordinates allowing the user to track boat for security purposes.



- **Automatic Solar Panel Cleaners:** Developed with Innovative Energy Solutions, a range of autonomous solar panel cleaning robots with a great ROI. For solar farms big and small. Sold to many mining corporations such as BHP, Rio Tinto and RadLink. Cleaners have an array of telemetry and sensor feedback for monitoring panels and weather as well as reducing manual labour.



## EDUCATION

2019 - current

**BACHELOR OF PHILOSOPHY**, UNIVERSITY OF WA

Currently completing an Electronic Engineering and Computer Science double degree at UWA, via the prestigious Bachelor of Philosophy course, 98 ATAR minimum entry score, aiming towards a Master of Professional Engineering.

The Bachelor of Philosophy course requires students to complete broadening units on top of their chosen degree units, such as Global Challenges, Research and Leadership.

[www.uwa.edu.au/study/courses/bachelor-of-philosophy](http://www.uwa.edu.au/study/courses/bachelor-of-philosophy)

2018

**SECONDARY EDUCATION**, ST MARKS ANGLICAN COMMUNITY SCHOOL

Graduated secondary education with a 98.45 ATAR score.

ATAR Courses: Mathematics Specialist, Mathematics Methods, Physics, Chemistry, English.

## ACTIVITIES AND ACHIEVEMENTS

2015 – 2019

### FIRST ROBOTICS COMPETITION, STUDENT, CAPTAIN AND MENTOR

Competed in the First Robotics Competition (FRC) since 2015 including qualifying and competing in the world championships in the USA for three years in a row. FRC is a worldwide robotics competition where teams of high school students have 6 weeks to design and build robots to compete and solve complex challenges.

<https://www.firstinspires.org/robotics/frc>. Principles of first are representative of real-world engineering and 'gracious professionalism' is the primary goal.

The team was run at Curtin University.

<https://scieng.curtin.edu.au/about-us/outreach/first-robotics-competition/>

I competed in the competition as lead programmer and electrician, led the team as team captain and robot driver. Following graduation from school I now mentor new students, teaching them the skills and knowledge needed.

FRC has taught me valuable social and life skills. In teamwork, leadership and independence. As well as professional engineering practices. In 2019 I founded an FRC team at UWA and plan to continue mentoring kids in robotics. This involved communicating with many high-up members of UWA and a large amount of organizational work.

2017 - 18

### DUKE OF EDINBURGH AWARD

Recipient of Duke of Edinburgh Bronze Award - <https://dukeofed.com.au/>. The Duke of Edinburgh award is a program where participants are required to complete four components in Voluntary Service, Skill Building, Physical Recreation and Adventurous Journey.

REFERENCES AND CERTIFICATES CAN BE GIVEN UPON REQUEST