

# KYLE AHLSCHLAGER

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## Education

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### Stellenbosch University

Western Cape, RSA

*Masters of Engineering in Electronic Engineering*

*Jan 2022 - Present*

- **Research Topic:** Developing an autonomous robotic platform, that is capable of navigation over unknown, rough terrain. A platform-fusion approach is used to ensure successful adaptability of the system. This research has resulted in two publications;
  - \* "Using a multi-robot system for improved path planning", published in 2023 RAPDASA-RobMech-PRASA-AMI Conference.
  - \* "Tethered Multi-Robot System for Improved Path Planning and Exploration", accepted into the 2023 iteration of ICAR (*International Conference on Advanced Robotics*).

### Stellenbosch University

Western Cape, RSA

*Bachelors of Engineering in Electrical and Electronic Engineering*

*Jan 2018 - Dec 2021*

- **Specialisation:** Robotics
- **Course average:** 65%
- **Final year research topic:** using trajectory optimisation to control a walking biped. This involved the design and construction of the biped, as well as the setup of a simulation environment to develop movement trajectories.

### Dale College Boys' High School

Eastern Cape, RSA

*National Senior Certificate*

*Jan 2013 - Dec 2017*

- **Course average:** 89%
- **Awards:** 2017 Dux Scholar.

## Technical Skills

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**Languages:** C, C++, Python, LaTeX

**Software:** Fusion 360, Inventor, SolidWorks, Onshape, Linux, MATLAB, Simulink, OpenCV

**Hardware:** Arduino, Raspberry Pi

**Fabrication:** 3D printing (FDM and Resin), Machine tools, Sheet metal

## Experience

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### Witchkrantz Farm

Eastern Cape, RSA

*General Worker*

*Jan 2015 - Present*

- Performing maintenance on tractors and other machinery.
- Installation and maintenance of a security system; CCTV, electric-fencing, access control.
- Installation and maintenance of a backup power system, solar inverter with Lithium-ion battery pack and backup generator.

### Berlin Meats and Dairy

Eastern Cape, RSA

*General Worker*

*Jan 2015 - Present*

- Installation and maintenance of a security system; CCTV, access control.
- Installation and maintenance of a backup power system, solar inverter with Lithium-ion battery pack and backup generator.
- Maintenance and troubleshooting of POS system.
- Interacting with a diverse group of employees and customers.

### Stellenbosch University

Western Cape, RSA

*Learning Assistant - Electronics 315, Computer Systems 245, Control Systems 314*

*Feb 2022 - Jun 2023*

- Assist students during tutorial and practical sessions.
- Assist in the marking of formative assessments and practical reports.