

# Zachary Atkinson

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## Profile

A passionate and inquisitive robotic engineer with a Master's degree (MEng) in Robotic Engineering from the University of Bath. Strong background in programming, particularly in Python, with hands-on experience in machine learning using PyTorch. Developed and trained robotic reinforcement learning policies in simulation environments with NVIDIA Isaac Sim and Isaac Lab and deploying them to real-world robotic platforms like the UR3 manipulator using ROS.

Experienced in a range of programming languages including Python, C++, and MATLAB, as well as working with microcontrollers such as Arduino and Raspberry Pi. Demonstrated ability to plan, design, and implement software solutions both independently and collaboratively. Adaptable, calm under pressure, and highly motivated to continue learning and solving complex problems.

## Selected Work Experience:

### Control Systems Engineer - Atlas Elektronik

*September 2022 – September 2023*

- **Python:** Developing programming knowledge through projects whilst reinforcing current programming knowledge.
- **Version control:** Using git and Jira for software development.
- **Unreal Engine 5:** Developing an understanding for how the Unreal 5 engine works and developing small projects in automated pathing for boats.
- **Presentations:** Delivering Mid and Full year presentations on individual project progress and completion to management, collaborating with colleagues on a Bid presentation to the Senior Leadership Team.
- **Project work:** Both independent and Collaborative project work, including automation of systems using game theory and working in teams to create search patterns.

### Online shopper - Sainsbury's

*June 2021-August 2021*

- Supported multiple stores in ensuring complete orders for delivery in a high paced environment.

### Customer Assistant - Evans Cycles

*June 2019- September 2020*

- Delivered excellent customer service, processed transactions and supported customers with purchases and maintenance of the bikes

## Education:

### University of Bath - MEng (Hons) Robotic Engineering with industrial placement

*2020-2025*

*2:1 ( Expected )*

- Manager in a university business project in developing an attachable robotic exoskeleton hand to aid in piano learning. Integration of other team members software to achieve functionality of a final product.
- Final year individual project developing a Sim2Real robot using Nvidia Isaac Sim and Isaac Lab
- Applied reinforcement learning to train robotic agents for pick-and-place tasks.
- Machine learning: Image recognition using CNNs and MLP
- Controlling physical and simulated robots using ROS.
- Control systems theory.

## **Woking College**

2018-2020

A levels: Computer Science (A\*), Mathematics: (A) , Physics: (A)

EPQ: A - *Project using python and a raspberry pi to design, build and control a remote-controlled car wirelessly including documentation on how it works.*

## **Woking High School**

2013-2018

- 10 GCSE'S including: Further Maths: A, Maths: 8, Physics: 8, English literature: 7

## **Activities and Interests**

Running

Cycling (*building and maintain bikes*)

Climbing

Video Games

Programming (*built and controlled a robot arm, using python*)

Formula 1