**Work Experience 2025 – Application Form**

**7 July – 11 July 2025**

Thank you for your interest in the Oxford Robotics Institute (ORI) Work Experience Programme. The week will run from **July 7th to July 11th 2025.**This is a non-residential work experience programme where participants will be working on a project alongside our engineering team.

Typical hours each day run from 9.30 am - 4.30pm and participants will be required to arrange their own transport to and from the ORI at these times. Please note that due to the level of the activities planned for the week, we will prioritise applicants in Year 10. We particularly encourage applications from students currently studying at Oxfordshire state-schools.

We expect students applying to the ORI for work experience to be studying appropriate GSCEs and, as far as possible, have already gained some relevant skills independently. We are offering two work experience streams; please see below for details. All participants will jointly have the opportunity to meet with professional staff and researchers at the ORI and see demonstrations and talks about robotics, alongside the activities listed below.

**Stream A:**

In this stream, you will program a [Clearpath Jackal](https://clearpathrobotics.com/jackal-small-unmanned-ground-vehicle/) wheeled robot to navigate its environment autonomously using Python and the Robot Operating System (ROS). After a brief introduction to the tools, you will develop your software first in simulation before moving on to testing your code on the real robot. Activities will include:

* Introduction to Python in robotics and Robot Operating System (ROS)
* Working on navigation of simulated Jackal robot
* Running code on a real Jackal mobile platform

**Stream A required skills/subjects:**

* ***Essential****:* studying GSCE Computer Science; and comfortable programming in Python.
* ***Desirable****:* prior experience with any flavour of Linux, scripting and shell environments; use of Jupyter notebooks; and prior experience programming for robotics, optimisation, or machine learning.

**Stream B:**

In Stream B, you will assemble, test and use an adapted version of the [Asmograf Pen Plotter](https://www.thingiverse.com/thing:3340918). This will involve both mechanical and electrical assembly, testing, debugging, and problem-solving. You will be introduced to Python and G-Code, programming languages which are commonly used to program and control 3D printers. You will then write code to draw pictures and generate shapes algorithmically. Activities will include:

* Assembling plotter hardware; debugging; and coming up with solutions
* Assembling wiring, instrumenting and testing PCBs
* Programming in Python on an Arduino - generate shapes algorithmically

**Stream B required skills/subjects:**

* ***Essential****:* studying GSCE Engineering or Design and Technology; and comfortable using hand tools.
* ***Desirable****:* prior experience with CAD tools; prior experience assembling mechanical devices, electronics, or other elements of robotic systems.

**To Apply:** Taking into account the requirements above, please fill the form below (you may sign the form electronically).

This application will collect personal data in order to contact you and follow up on your application. We also collect details of ethinicity, gender, age, social economical background and education. This is to be able to assess the widening criteria for the applications and be able to measure the impact of the programme.

**Work Experience Student’s Details: (\*required)**

|  |  |
| --- | --- |
| **Name\*:** |  |
| **Preferred Name\*:** |  |
| **Gender** |  |
| **Pronouns** |  |
| **Ethnicity** |  |
| **Age at time of Work Experience\*:** |  |
| **School year\*:** |  |
| **Name of your school\*:** |  |
| **Type of school are you in currently?** | ☐ Comprehensive (State School)  ☐ Independent (Fee Paying)  ☐ Special School  ☐ Studio School  ☐ Other |
| **School County\*:** |  |
| **Preferred programme\*:**  (*tick the relevant box)* | ☐ Stream A ☐ Stream B |
| **How did you find out about this programme?** |  |
| **Email address\*:** |  |
| **Email address of parent/guardian\*:** |  |
| **Why are you interested in coming to the ORI and what do you expect to learn here? \***  *(approx. 150 words)* | |

|  |
| --- |
| **Tell us about an interesting hardware and/or software project that you have done. What was the most challenging part about it? \*** *(approx. 150 words)* |
| **Please also provide a short list of your grades for relevant courses you have taken, along with your hobbies and interests. \*** |

Please send your completed applications to oriadmin@robots.ox.ac.uk.

**IMPORTANT** - The deadline for all applications is **5pm on Friday 28th March.**

Please allow up to 4 weeks from this date for your application to be considered and to confirm the outcome of your application.

We look forward to hearing from you.

Kindest regards,

Helene & the Oxford Robotics Institute Engineering Team