

Will Terry

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Personal Statement

I am pursuing an **MSc in Robotics and AI** at **UCL**, specializing in sensing, estimation and control systems, and neural networks. Building on the skills I developed during my earlier studies at Leeds University, I enjoy combining my electronics, programming, and design expertise to work on creative side projects published on my GitHub pages website. I very much want to continue blending technical expertise with creative thinking in my professional life - contributing to working projects and developing new projects.

Education

University College London, MSc Robotics and AI Sept 2024 – Sept 2025

- Grade: TBD
- **Modules:** Computer Vision, Estimation and Control, Modeling and Motion Planning, Introduction to Machine Learning, Aerial Robotics, Object Detection and Classification, Robot Vision and Navigation, Robotic Sensing Manipulation and Interaction

Deeplearning.ai | Stanford Online, Machine Learning Specialization April 2024 – June 2024

- Grade: Passed
- **Modules:** Supervised Machine Learning, Regression and Classification, Advanced Learning Algorithms, Unsupervised Learning, Recommenders and Reinforcement Learning

University of Leeds, BEng Robotics and Mechatronics Sept 2020 – June 2023

- Grade: Upper Second Class
- **Modules:** Programming for the Web, Circuit Analysis and Design, Communications for Robotics, Digital Electronics and Micro Controllers, Engineering Mathematics, Further Engineering Mathematics, Electronic Design Project, Introduction to Mechatronics and Robotics, Mechatronics and Robotics, Artificial Intelligence, Electronics Circuit Design, Power Electronics, Control Systems, Embedded Systems Project, Microprocessors and Programmable Logic, Sensors and Actuators and Mechanisms, Design and Manufacture for Mechatronics and Robotics, Machine Learning, Intelligent Systems and Robotics, Professional Studies, Electric Machines, Additive Manufacturing

Experience

Product Management Intern, Edwards Vacuum (Burgess Hill, UK) June 2024 – Sept 2024

- Created a company-wide product configurator, with **global reach**.
- Helped develop graduate onboarding process with management.
- My contributions were specifically acknowledged by the President of Vacuum Chamber Solutions, and the contract was extended by two weeks based on **outstanding performance**.

Senior Supervisor, Dilli Curry Restaurant (Haslemere, UK) June 2023 – Dec 2023

- Within two months of working, Promoted to Senior Supervisor through **hard work** and displays of **leadership**.
- Led a small team of 5 front of house staff during evenings.

Notable Projects

Below is a short list of the main projects that I have worked on during my university studies. My website provides more information on these and other projects.

TurtleBot Navigation and Picture Recognition

- Programmed a TurtleBot using ROS1 to autonomously navigate a maze, identify coloured doors using the OpenCV library, and identify a specific Cluedo character using Harris Corner Detection.
- Gained solid experience in ROS1, which enabled further exploration and mastery of ROS2 for advanced robotics projects.
- **Tools Used: ROS1, OpenCV, Python, Position Localization and Estimation**

Interactive Stability Training Game for Elderly Fall Prevention

- University of Leeds Dissertation.
- Developed a game using Unreal Engine 4 and Xbox Kinect to map a player's in-game character to real-life movements. One valuable application, with regular engagement, could be to strengthen stability muscles and reduce fall risk for elderly people.
- Conducted accuracy testing with a Vicon motion capture system to evaluate and validate movement mapping and system reliability.
- **Tools Used: Unreal Engine 4, Xbox Kinect, Vicon Motion Capture, C++**

Raspberry Pi Retro Gaming Console

- Designed and built a retro gaming console using a Raspberry Pi and a modified RetroPie OS, adding classic games like Pokémon Red and Pokémon Emerald for a nostalgic user experience.
- Constructed a custom case with cooling features, a USB slot for controllers, and GPIO-connected buttons for volume control, power, and reset functionality.
- Enhanced Linux proficiency by configuring the system via the command line, modifying system files, and setting up the gaming environment manually.
- **Tools Used: Raspberry Pi, RetroPie OS, Circuit Design, Python, Linux Command Line**

Four Wheeled Robot with Accurate Position Control in Simulation

- Using a given simulation created in pybullet, pinnocchio and Pinwrapper, we used Extended Kalman Filters and MPC to estimate and control the robots position.
- Used SK-learn optimization functions for parameter fine tuning.
- Conducted rigorous testing to find optimised control and estimation of the four wheeled robot.
- **Tools Used: Python, Pybullet, Numpy, SciKit Learn, Extended Kalman Filters, Adaptive Model Predictive Control**

Skills

Languages: C++, C, Python

Packages: Matplotlib, Numpy, SciKit Learn, CV2, Pytorch

Technologies: Linux Ubuntu, Embedded Systems, Arduino, ROS1, ROS2, Fusion360, MATLAB, Conda Environments

Soft Skills: Self Motivation, Positive Attitude, Ability to Focus, Time Management, Relationship Building

References

Available upon request.