**Nour Morsi** BEng, MRes, AFHEA, AMIMechE

Glasgow, UK | [Linkedin](mailto:Linkedin) | 07-460690629 | Nour.Morsi@gcu.ac.uk

**Research interests**

3D-printing, rapid prototyping, robotics and autonomous systems, artificial intelligence and machine learning; computer and robot vision.

**Education**

**PhD in Robotics and Machine Vision Systems & PGR Certificate of Research Glasgow, UK**

*Glasgow Caledonian University, Glasgow 2020-present*

* Specialized in robot motion integrated with machine vision, 3D printing, and AI.
* Thesis title: Feasibility testing and part handling by advanced simulation for small and medium sized enterprises.
* Developed automated robotic systems for adaptive inspection, requiring expertise in robotic motion, machine vision, light systems, and machine learning integration.
* Received **Best Poster Award** at the PGcon Conference 2022

**BENG in Mechanical Engineering (1st Class Honours) Glasgow, UK**

*University of Strathclyde, Glasgow* 2016-2020

* *Dean’s Honour list (2017,2018,2019)*
* Thesis title: Evaporative Cooling System in Building Components.
* Design and simulation for cooling components , achieving a 30% cooling improvement.

**WORK EXPERIENCE**

**Teaching Assistant**

*Glasgow Caledonian University, Glasgow 2022 –2023*

* Developed and supervised image processing and machine learning tutorials for students.
* Supervised 3rd year mechanical design projects and python lab sessions.

**Robotics Specialist**

*Dubai TRA Summer Camp, Dubai 2019-2020*

* Planned robotics educational and recreational activities for students.
* Proposed and planned interactive workshops, increasing summer intake by 20%

**Junior Mechanical Engineering Intern**

*Heights Contracting LLC, Abu Dhabi 2018-2019*

* Analyzed pressure valve designs using finite analysis and non-destructive testing.
* Provided implementation strategies on the assembly of pressure valves.

**Publications**

* **Morsi, Nour M.,** Harrison, C., Mata, M., & Semple, D. (2021). Feasibility Testing of Robotics and Part Handling by Advanced Simulation for Small and Medium-Sized Enterprises. International Conference on Robotics, Computer Vision, and Intelligent Systems - ROBOVIS 2021.
* **Morsi, Nour M.,** Harrison, C., Mata, M., & Semple, D. (2023). Autonomous robotic inspection system for drill holes tilt: feasibility and development by advanced simulation and real testing. The 28th International Conference on Automation and Computing (ICAC2023).
* **Morsi, Nour M.,** Harrison, C., Mata, M., & Semple, D. (2024). In-progress: Development of an adaptive robotic inspection system for aerospace components. Anticipated publication in Frontiers in Robotics and AI.

**Technical training & courses:**

* Supervised Machine Learning: Regression and Classification – Coursera
* Associate Fellow of Higher education- Advanced Higher Education, UK
* Python Programming bootcamp- IT Professional Training (ITPT).

**Technical skills**

* Design and build end effector systems using Solidworks, Ansys, and 3D printers.
* Programming languages: C++, Python, Matlab.
* Familiar with many libraries for scientific and robot related work such as: Tensorflow, NumPy, SciPy,
* Libraries: Tensorflow, NumPy, SciPy, Matplotlib, Scikit-learn, OpenCV.
* Experience with Arduino, Raspberry Pi, ROS, and Linux.

**Extra-curriclar activities**

* ImechE Member – Active member of the ImechE (Associate Member)
* Stem Ambassador- Organised and assisted workshops hosted in Glasgow Caledonian University.
* Masters project mentor- Assisted masters students in mechanical and electrical projects.