





# Mengjie Zhang

+44 7378274422 | [mz2221@imperial.ac.uk](mailto:mz2221@imperial.ac.uk)

 Instagram |  GitHub |  Twitter/X |  Facebook  Personal website

South Kensington, London, SW7 3BQ, United Kingdom

## WORK EXPERIENCE

### • Rutherford Appleton Laboratory STFC

Jul 24 - Sep 24

Microelectronics design engineer

Oxford, United Kingdom

- Collaborative design of IC circuit sub-component by improving existing technologies using Cadence software.

### • International Business Machines Corporation (IBM)

Jul 24 - Sep 24

Microelectronics design engineer

London, United Kingdom

- Development of robot deep learning features by optimizing model size and parameters using TensorFlow and Raspberry PI.

## EDUCATION

### • Imperial College London

Oct 2021 - Jul 2025

Electrical and Electronic Engineering MEng

London, United Kingdom

- Degree classification: 1:1

### • Urmston Grammar School

Sep 2019 - Jun 2021

High school Education

Manchester, United Kingdom

- Mathematics, Grade: A\*
- Further Mathematics, Grade: A\*
- Physics, Grade: A\*
- Chemistry, Grade: B

## NOTABLE PROJECTS

### • Deep learning system optimization

Mar 2025 - May 2025

Tools: Pytorch

- Leading role in a collaborative designed of a knowledge distillation system for Large-language-model learning.

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### • Robotic manipulator design and control

Jan 2024 - May 2024

Tools: 5 DoF robotic manipulator



- \* Leading role in a collective project designed to develop a fully customizable gripper in Solidworks and implement trajectory generation and optimization algorithms for efficient object gripping and manipulation.

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### • Research in 3D reconstruction

Jul 2023 - Sep 2023

Tools: TensorFlow, Colmap

- \* Individual project structured around the improvement of NeRF (neural radiance fields) to achieve good image reconstruction, implement multi-resolution hash encoding, and improve computational efficiency for the processing of data.

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### • Two-wheel self-balancing robot

May 2022 - Jul 2022

Tools: SMP microprocessor, servo motor, driver

- \* Leading role in a collective project designed to develop a dual loop PDI controller for two-wheel self-balancing robot by using SMP microprocessors and motor.

## SKILLS

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- **Programming Languages:** Python, C++, MATLAB, Verilog HDL
- **Machine learning tools:** Convolutional neural networks, Recurrent neural networks, autoencoders, diffusion networks, deep reinforcement learning
- **Machine learning tools/software:** TensorFlow, Pytorch, NEAT algorithm for maze solving reinforcement learning agents
- **IC design software:** Cadence, LTspice
- **Embedded systems programming:** Concurrent programming in C++, Real-time operating system, multi-threading
- **Computational neural science tools:** Spiking neural networks, surrogate gradients, decoder for brain-computer-interface
- **CAD software:** Solidworks, 2D parts design, elementary 3D parts design
- **Research Skills:** writing research reviews and reports

## HONORS AND AWARDS

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- - Best group project** Jul 2022  
*Imperial College London*
    - \* Award for the best 1st year engineering project
    - \* I worked collaboratively to design a rock detecting moon rover robot
- - Dean's list 2nd year** Jul 2023  
*Imperial College London*
    - \* Award for the top 10% performing students

## LEADERSHIP EXPERIENCE

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- - Leadership Role A** May 2023 - Jul 2023  
*2nd year group projects*
    - \* I was responsible for the team management and the final integration of a robot control and navigation system.
- - Leadership Role B** Jan 2024 - May 2024  
*Smart IoT project*
    - \* I was responsible for the final integration and testing of the prototype product.

## VOLUNTEER EXPERIENCE

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- - Pre-school teaching** Jun 2019 - Jun 2019  
*Abborzford preparatory school*
    - \* My main responsibility was to assist year 1 students to learn more efficiently and collaboratively
    - \* I learnt how to engage with groups of people that may be difficult to communicate or manage

## PROFESSIONAL MEMBERSHIPS

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- **IET membership**, Membership ID: 1100989277 Aug 2022 - Present

## ADDITIONAL INFORMATION

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**Languages:** English (Fluent), Chinese mandarin (Fluent), French (basic)

## REFERENCES

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1. **Dr. Oleksiy Sydoruk**  
Senior Lectuer, Department of Electrical and Electronic Engineering  
Imperial College London  
Email: o.sydoruk@imperial.ac.uk  
Phone: +44 20 7594 6188
2. **Prof. David Angeli**  
Professor of Non-linear Network Dynamics, Department of Electrical and Electronic Engineering  
Imperial College London  
Email: d.angeli@imperial.ac.uk  
Phone: +44 7502 197 557
3. **Prof. Kristel Fobelets**  
Professor of Nanodevices, Department of Electrical and Electronic Engineering  
Imperial College London  
Email: k.fobelets@imperial.ac.uk  
Phone: +44 20 7594 6236