Mengjie Zhang

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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.

  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 customable gripper in Solidworks and implement trajectory generation and optimization algorithms for efficient object griping and manipulation.

  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.

  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

- **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

- **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

- **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

- **Pre-school teaching** *Jun 2019 - Jun 2019*
  Abborzford preparatory school
  * My main responsibility was to assists 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

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

Additional Information

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

REFERENCES

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