# Ibrahim Aldarmaki

## EDUCATION

**Carnegie Mellon University** — August 2025 – Present
*Masters of Science    Research Interests: Machine Learning, Deep Learning* — Pittsburgh, USA

**The University of Edinburgh** — Sep 2020 – May 2023
*BEng (Hons.) in Electronics and Electrical Engineering    First Class Honours* — Edinburgh, UK

## EXPERIENCE

**Research Associate** — April 2025 – July 2025
*Mohammed Bin Zayed University of Artificial Intelligence* — Abu Dhabi, UAE
- Worked on causal inference and causal representation learning to uncover underlying concepts and causal models from high-dimensional data.
- Investigated the OpenReview rebuttal system and uncovered latent causal mechanisms that directly influence rebuttal-driven score changes in the peer-review process.

**Research Associate** — Sep 2024 – April 2025
*Khalifa University* — Abu Dhabi, UAE
- Conducted research on Wi-Fi sensing for healthcare applications, with a focus on signal processing and machine learning techniques to enhance sensing accuracy and reliability.
- Developed software designs and solutions for real-time human motion detection through Wi-Fi signals using off-the-shelf hardware.

**Research Associate** — Dec 2023 – April 2024
*Mohammed Bin Zayed University of Artificial Intelligence* — Abu Dhabi, UAE
- Worked on deep neural networks for Multichannel Speech Enhancement and developed a novel, parameter-efficient neural architecture.
- Investigating generative and predictive code-switching models, utilizing pre-trained Language Models (LMs) to advance multilingual code-switching prediction and generation.

**Teaching Assistant** — Sep 2022 – May 2023
*The University of Edinburgh* — Edinburgh, UK
- Served as a teaching assistant for the third-year digital systems design course (ELEE09035), guiding students in developing complex synchronous digital systems and realizing finite-state machines from high-level functional specifications and prototyping them on FPGA hardware using Verilog HDL.
- Facilitated the learning process in the second-year digital systems design course (ELEE08015) in analyzing and designing combinational and sequential gate-level circuits.

**Space Science Researcher** — Jun 2022 – Aug 2022
*Mohammed Bin Rashid Space Centre* — Dubai, UAE
- Studied the Martian surface diurnal temperature and characterized its thermophysical properties using observed diurnal temperatures taken by Emirates Mars Mission's (EMM) Emirates Mars Infrared Spectrometer (EMIRS).
- Developed thermophysical properties estimation algorithms that surpassed the standards in accuracy and efficiency.

## PUBLICATIONS

Loka Li* **Ibrahim Aldarmaki**\*, Minghao Fu, Wong Yu Kang, Yunlong Deng, Qiang Huang, Jing Yang, Jin Tian, Guangyi Chen, Kun Zhang "How Effective is Your Rebuttal? Identifying Causal Models from the OpenReview System ," NeurIPS 2025 Workshop on CauScien: Uncovering Causality in Science

**Ibrahim Aldarmaki**, Aysha Alteneiji, Kin Poon, Ubaid Ahmed, Ahmed Suliman, "Wi-Fi Sensing for Motion Detection using ESP-32 and Raspberry Pi 4: A Comparison," CCNCPS 2025

**Ibrahim Aldarmaki**, Thamar Solorio, Bhiksha Raj, Hanan Aldarmaki, "RelUNet: Relative Channel Fusion U-Net for Multichannel Speech Enhancement," arXiv:2410.05019, 2024. [Online]. Avaialble: https://arxiv.org/abs/2410.05019