RICHARD MENZIES

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EDUCATION

University of Glasgow | PhD   2022 – Present
Studying Neural Network Topology Optimisation

University of Glasgow | First Class Honours   2018 – 2022
First Class BSc(Hons) in Computer Science
Won achievement award for top 5% in the year

EXPERIENCE

Conferences
- **BMVC 2024 Doctoral Consortium Chair** - Currently organising the BMVC 2024 Doctoral Consortium taking place at BMVC 2024, November 25th - November 28th.
- **WCCI 2024 (IJCNN branch) | Soft Pruning and Latent Space Dimensionallity Reduction** - Uses a novel method of decay based pruning to remove weights. Additionally applies this method to the latent space of an autoencoder - identifying and removing nodes from the latent space - with a high level of success.

Tutoring
- **Data Fundumentals(H)**   2024 – 2025
- **Artificial Intelligence(H)**   2022 – 2023
- **Network Systems(H)**   2022 – 2023

Open Source Coding
- **Currently contributing** to GODOT (**C++**)
- Previously contributed to Inkscape (**C++**), GitUI (**Rust**)

Internships
- **University of Glasgow | Research Internship** - Studied Neural Network Weight Initialisation methods with an aim of extending He initialisation to a variety of different activation functions.

Technologies
- Previously Programmed in: Python, C++, Rust, Go, HTML/CSS/JS/Vue, Java, C#(Unity), C, Flutter.
- Use **Python** and **PyTorch** significantly within my PhD implementation. Use **Linux (Manjaro)** as my main OS.

Projects
- **4th Year Undergraduate Project** - Developed a new type of Neural Network as an alternative to the MLP which should achieve better information representation and higher accuracy using topology optimisation.
- **PhD Implementation** - Wrote a python library for running neural networks that enables dynamic topology changes while training, something which occurs in Neural Topology Optimisation. Make use of this extensively in my PhD.

CLUBS AND SOCIETIES

Glasgow Polytechnic Chess Club | Treasurer   2024 – Present
- Organising Chess960 friendly matches and tournaments for the club.

GU Physics Society | Secretary   2020 – 2022
University of Glasgow   *OCM 2019 - 2020*

GU Table Tennis Club | Founder & President   2019 – 2022
University of Glasgow

ADDITIONAL INFORMATION

Hobbies: Running, Piano, Chess, Learning French (attending class at B1+ level)
Boards: Student Member of the University of Glasgow Strategic Advisory Board
Research Groups: Computer Vision and Autonomous Systems group, Artificial and Biological Intelligence group