Austin **Dibble**

PHD STUDENT · SOFTWARE ENGINEER

Glasgow, UK

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Summary

PhD Student in Psychology and Neuroscience with a focus on Artificial Intelligence at the University of Glasgow. Brings a robust background in computer science and engineering, with:

- An MSc in Advanced Computer Science (AI specialization) from the University of Strathclyde, distinction (2023).
- A BSc in Electrical & Computer Engineering from Oregon State University, summa cum laude (2020).
- Over 4 years of relevant industry experience in software and embedded systems engineering.

Currently, focused on leveraging deep learning for neuroimaging to advance our understanding of the brain, with a great interest in clinical applications.

Education

University of Glasgow   *Glasgow, UK*

PHD STUDENT IN PSYCHOLOGY AND NEUROSCIENCE   *Sept. 2023 - Present*

- **Research Focus:** Application of Deep Learning methods to make longitudinal projections of patient symptom trajectories using neuroimaging.

University of Strathclyde   *Glasgow, UK*

M.SC. ADVANCED COMPUTER SCIENCE WITH ARTIFICIAL INTELLIGENCE   *Sept. 2022 - Sept. 2023*

- **Graduated:** With distinction.
- **Relevant Coursework:** Deep Learning for Visual Computing, Statistics & Bayesian Analysis, Artificial Planning.

Oregon State University   *Corvallis, OR, USA*

B.SC. IN ELECTRICAL AND COMPUTER ENGINEERING   *Sept. 2015 - Mar. 2020*

- **Cumulative GPA:** 3.93 / 4.0 (UK 1st class equiv.).
- **Minor:** Spanish.
- **Relevant Coursework:** Machine Learning & Data Mining, Digital Image Processing, Analysis of Algorithms, Probability, Discrete Mathematics, Signal Processing.

Work Experience

Siemens Digital Industries Software   *Wilsonville, Oregon, USA*

SOFTWARE ENGINEER   *Apr. 2020 - Sept. 2022*

- Refined performance testing and improvements on Linux systems for Siemens' EDA product, improving process runtime by 40%.
- Operated within a cross-cultural and international team to coordinate bug fixes and performance improvements for customers around the world.
- Developed new UI features in a C++ environment, while utilizing the newest compiler and language features.
- Cooperated across departments to develop new features and performance improvements that meet the needs of a diverse customer base.

Semiconductor Research Corporation   *Corvallis, Oregon, USA*

UNDERGRADUATE RESEARCHER   *Oct. 2019 - Mar. 2020*

- Collaborated with postgraduate students in digital signal processing for analog to digital converters.
- Investigated novel algorithms for improving the performance of A-to-D converters when operating in noisy and non-linear environments.
- Designed MATLAB simulations to analyze the performance of digital signal processing.

IND LLC   *Vancouver, Washington, USA*

EMBEDDED SYSTEMS ENGINEER   *Jun. 2019 - Apr. 2020*

- Innovated firmware for ARM MCU to communicate and control physical processes such as temperature, humidity, pressure, and fluid flow via Internet communication.
- Managed the design and development of a new touch-screen display interface that featured an ARM Cortex-M7 processor, Bluetooth LE, Wi-Fi, and GPS.
- Coordinated with the hardware team, designing new schematics to meet customer requirements.
- Created firmware in C/C++ and an embedded GUI using uGFX.

Projects

Predicted Brain Age and Neuropsychological Risk Assessment   *Sept. 2023 - Present*

Applying state-of-the-art deep learning methods to build a brain age prediction model which can be used to predict neuropsychological risks.

Characterising Open Cast Mining from Satellite Data   *May 2023 - Sept. 2023*

Conducted research on automating surface mine activity assessment using deep learning. Developed a novel Sentinel-2 dataset for change detection over surface mine areas and presented an index for activity detection in remote sensing images. The work contributes to robust environmental governance and offers a public dataset for further research.
Link to more information.

Universal IoT Device (Senior/Bachelor's Project)   *Oct. 2018 - May 2019*

Developed a secure IIoT system for use in industrial settings. Key features included a secure, real-time operating system (RTOS) and multiple communication channels: UART, SPI, I2C, PWM, and full-stack Internet (UDP, TCP, HTTP).
Link to more information.

Honors & Awards

UNIVERSITY OF GLASGOW

2023-2026	**Fully-Funded PhD Studentship**: Awarded by the Scottish Graduate School of Social Science, Doctoral Training Partnership (SGSSS-DTP), on behalf of the Economic and Social Research Council (ESRC). Includes full payment of PhD fees and a stipend of approx. £18,622 for 2023/24, increased annually.

UNIVERSITY OF STRATHCLYDE

2022	**Faculty of Science Masters Scholarship for International Students**: Scholarship awarded on a competitive basis to candidates who demonstrate excellent academic performance.

OREGON STATE UNIVERSITY

2019	**Orin F. Zimmerman Scholarship**: Awarded to a single student on the basis of aptitude and interest in fostering environmentally acceptable and socially productive knowledge, innovations, and applications in electrical technology.
2018	**Knaus Electrical Engineering Scholarship**: Granted to one student on basis of GPA from among the top 10% of their class.

Skills

Machine Learning	Deep learning, neural network design and optimization, statistical data analysis.
Development	Python, C++/C (x86, embedded), JavaScript, MATLAB; Advanced Python for machine learning.
Software Tools	PyTorch, Tensorflow, OpenCV.
Languages	English (native speaker), Spanish (CEFR B2).

Extracurricular Activity

University of Strathclyde Faculty of Science

PGT STUDENT REPRESENTATIVE   *Oct. 2022 - Sep. 2023*

- Communicated with fellow students to address their concerns and feedback.
- Collected survey feedback data and presented to the student-staff liaison committee.
- Programme improvements were made on the basis of my feedback and recommendations.