

Rory Holmes

Manchester | 07*** ***** | rorythomas511@gmail.com | [linkedin.com/in/rory-holmes](https://www.linkedin.com/in/rory-holmes)

EDUCATION

MSc Computational Neuroscience; Distinction Sept. 2022
University of Sheffield

BSc (Hons) Psychology; First-Class June 2020
University of Sheffield

EXPERIENCE

Junior Software Developer | *C#, .NET, SQL, JavaScript, React* June 2023 – Present
Omnisis Ltd

- Developing an ASP.NET web API, translating high-level requirements into functional endpoints
- Work autonomously on daily tasks, making critical low-level design decisions
- Address bug fixes and feature requests across both frontend and backend systems

Graduate Researcher | *Python, PyTorch* Oct. 2022 – June 2023
University of Sheffield

- Conducted research at the intersection of neuroscience, AI, machine learning and robotics
- Collaborated with Opteran Technologies to investigate embodied unsupervised learning algorithms for acquiring adaptive multimodal representations, in the context of autonomous robotic control
- Developed various prototype models utilising neural network architectures such as self-organising maps, attractor networks, and variational autoencoders
- Assisted an undergraduate research project by building an image acquisition and processing pipeline, enhancing data collection efficiency

Software & Data Intern | *C#, .NET, SQL, Python* June 2021 – June 2022
Omnisis Ltd

- Implemented a dynamic data processing system utilising multithreading and memoization, reducing the time to generate essential files from up to 30 minutes to mere seconds, resulting in increased productivity for the team
- Performed market segmentation through dimensionality reduction, clustering and classification using scikit-learn, successfully identifying incentives for a survey panel, resulting in improved targeting and engagement strategies

CERTIFICATIONS

ASP.NET Core 6 Web API Fundamentals | *Pluralsight* July 2023

The Web Developer Bootcamp | *Udemy* June 2023

Machine Learning Specialization | *Stanford Online/DeepLearning.AI through Coursera* Oct. 2022

PERSONAL PROJECTS

Fish and Shark ABM | *Python, PyTorch*

- Collaborated with a small team to develop a sophisticated agent-based model of fish schooling and shark predation behaviour, leveraging parallel computing over GPU through CUDA to optimise performance

Reverse Engineering Gene Networks | *Python, C++*

- Developed an advanced ML pipeline utilising recurrent neural networks and advanced image-processing techniques, to reverse engineer gene regulatory networks from in situ hybridization data

TECHNICAL SKILLS

Languages: C#, Python, JavaScript, SQL, HTML, CSS, C++, VB, MATLAB

Web Development: React, Bootstrap, Node.js, Express, ASP.NET, .NET, MVC

Databases & ORMs: SQL Server, MongoDB, Mongoose, Entity Framework, LINQ

Developer Tools: Git, Visual Studio, VS Code, Azure DevOps, PyCharm, Jupyter

Data Science & ML: PyTorch, TensorFlow, NumPy, pandas, Matplotlib, Plotly, seaborn, scikit-learn, scikit-image

AWARDS

- EPSRC DTP iCASE studentship, 2022
- MSc merit-based scholarship, 2021