

Samuel Appleby

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 🔗 <https://www.samuelappleby.com> in Samuel Appleby 🌐 SamuelAppleby



Experience

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| Teaching Assistant Newcastle University | Newcastle-upon-Tyne, UK Sept 2022 – June 2025 |
| <ul style="list-style-type: none"> During my PhD, I was a Teaching Assistant for the School of Computing at my university, demonstrating during practical classes and marking students' coursework. Modules: <i>Fundamentals of Computing</i>; <i>Computer Systems Design and Architectures</i>; <i>Software Systems Design and Implementation</i>; <i>Introducing Contemporary Topics in Computing</i> and <i>Computer Applications</i>. | |
| Junior Network Programmer Lucid Games Ltd | Liverpool, UK Apr 2020 – Dec 2020 |
| <ul style="list-style-type: none"> Management and development of the online web service complete with documentation. Designing the online matchmaking filtering system for a new PS5 title, <i>Destruction AllStars</i>. Design and integration of the web service communication with automated systems using Unreal Engine's Gauntlet automation framework. | |

Education

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| Newcastle University (<i>Awaiting Thesis Defence</i>) PhD in Computer Science | Jan 2022 – |
| <ul style="list-style-type: none"> Thesis: <i>On the Modelling of Temporal Data: Linear Logics in Event Logs and Deep Reinforcement Learning in Real-Time Simulations</i>. | |
| Newcastle University MSc Computer Game Engineering | Sep 2020 – Aug 2021 |
| <ul style="list-style-type: none"> Dissertation: <i>Networking Techniques and Strategies to Benefit User Experience in Online Multiplayer Games</i>. Grade: Distinction | |
| Newcastle University BSc Computer Science | Sep 2017 – Aug 2020 |
| <ul style="list-style-type: none"> Dissertation: <i>Develop an AI Agent Using Goal Oriented Action Planning that can Demonstrate Effective Solution Finding in Distinct World Environments</i>. Grade: 1:1 | |

Publications

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| From Camera Image to Active Target Tracking: Modelling, Encoding and Metrical Analysis for Unmanned Underwater Vehicles Samuel Appleby , Giacomo Bergami, Graham Morgan 10.3390/ai6040071 🔗 | Apr 2025 |
| SWiMM DEEPeR: A Simulated Underwater Environment for Tracking Marine Mammals Using Deep Reinforcement Learning and BlueROV2 Samuel Appleby , Kirsten Crane, Giacomo Bergami A. Stephen McGough 10.1109/CoG57401.2023.10333168 🔗 | Dec 2023 |
| Specification Mining over Temporal Data Giacomo Bergami, Samuel Appleby Graham Morgan 10.3390/computers12090185 🔗 | Sep 2023 |
| Enhancing Declarative Temporal Model Mining in Relational Databases: A Preliminary Study Samuel Appleby , Giacomo Bergami, Graham Morgan 10.1145/3589462.3589491 🔗 | May 2023 |
| Quickening Data-Aware Conformance Checking through Temporal Algebras Giacomo Bergami, Samuel Appleby , Graham Morgan 10.3390/info14030173 🔗 | Mar 2023 |
| Running Temporal Logical Queries on the Relational Model Samuel Appleby , Giacomo Bergami, Graham Morgan 10.1145/3548785.3548786 🔗 | Sep 2022 |

Public Projects

Pokémon Analyser Tool



- Developed a Pokémon type analyser for game balancing (C#).
- Google API to communicate with online spreadsheet datasets.
- Used by other developers for Pokémon spin-off games.

Skills & Technologies

Expertise: Machine Learning, Reinforcement Learning, Deep Learning, Data Mining, Formal Verification.

Debugging: Visual Studio, Visual Studio Code, PyCharm, IntelliJ, RStudio, TeXstudio.

Languages: Python, C#, C++, Java, C, R, JavaScript, L^AT_EX.

Databases: MySQL, PostgreSQL, MongoDB.

Source Control: Git, Perforce, Jenkins.

Web: HTML, CSS, Node.js, Postman.

Game Engines: Unity, Unreal.

Achievements & Certification

[Process Mining: Data Science in Action](#) 

Feb 2023 – May 2023

Eindhoven University of Technology

Prof. Wil van der Aalst

[Machine Learning](#) 

Mar 2022 – July 2022

Stanford University

Prof. Andrew Ng

Philip Merlin Prize for Best Dissertation by an MSc Student in the School of Computing

Sep 2020 – Aug 2021

Newcastle University

References

Available on Request.