Joseph A. Binns

Sweden / England based

EMPLOYMENT

Study Support Mentor, *Lund University, Sweden*   *March 2021 – present*
- Providing one-to-one tailored support and teaching for BSc students at the Department of Physics.

Festival Steward, *Oxfam, UK*   *August 2019, August 2021*
- Assisted at some of the UK's busiest festivals. Delivered efficient and proper radio communication as the acting supervisor handling critical medical emergencies.

Software Engineer, *MLabs: Urban Mobility Labs, Bloomsbury, London, UK*   *July 2019 – August 2019*
- Lead development on a realistic, real-time 3D urban environment simulation using C# and the Unity game engine, for use by an automated transport planning system.
- Released the first build, establishing the core framework for future developments.

Baker, *Marks & Spencer, Bromley, London, UK*   *August 2018 – July 2019*
- Regularly interacted with customers and surpassed the company goals in a team oriented environment.

Conservation Volunteer, *TCV, Greenwich, London, UK*   *December 2016 – August 2019*
- Worked in a heavy labour environment in both leader and team player roles.

National Citizen Service, *UK*   *July 2016*
- Participated in 1 month worth of public speaking workshops and team building activities.
- Ultimately launched a successful pitch to philanthropists, for the benefit of local charities.

EDUCATION

BSc Theoretical Physics, *Lund University, Sweden*   *Aug 2019 – June 2022*
- Selected Courses: Artificial Intelligence, Computational Physics, Quantum Mechanics.
- Notable Achievements: Semi-finalist in the 2021 Lund Innovation Challenge.
- Thesis is on the topic of determining the weak decay regularisation strength in Artificial Neural Networks.

A Levels, *SFH Sixth Form, London, UK*   *July 2016 – July 2018*
- Selected Courses: [A] Physics, [A] Mathematics, [A] Further Mathematics, [B] Computer Science, [A] Extended Project Qualification
- Notable Achievements: Two time Brilliant Club Scholars Programme graduate, for high achievers.

GCSEs, *Forest Hill School, London, UK*   *July 2011 – July 2016*
- Notable Achievements: Selected by my peers to be one of few school prefects, from a pool of over 1000. Recipient of the Academic Endeavour Award.

SELECTED PROJECTS

Stylised Character Controller,   *August 2021 – present*
- Developed a Stylised physics-based Character Controller.
- Worked as a C# Game Programmer in the Unity game engine.
- Featured in GameDevDigest.

Raymarch Explorer,   *April 2019 – August 2019*
- Developed a real time Raymarch Explorer capable of 3D fractal deep zooms.
- Worked as a Software Engineer in both Java and OpenGL using the LWJGL.
- Utilised arbitrary precision arithmetic on both the CPU and GPU.

***N*-body simulator**   *August 2017 – March 2018*
- Developed a Real Time, *N*-body Gravitational Simulator and GUI.
- Worked as a C# Software Engineer in the Unity game engine.
- The program accesses (via Telnet) planetary data from the NASA Horizons database.
- Utilises various complexity reducing algorithms to optimise a large-scale physics-based simulation.

TECHNICAL SKILLS

Programming Fluency: C#, Python, JavaScript, Java, C++, MATLAB, LaTeX, HTML, CSS.
Libraries / Frameworks: Tensorflow, Keras, LWJGL, Mapbox, Discord.js, Forge Networking, WordPress.
Additional Tools: Git, Unity, Blender, Photoshop, Aseprite, Famitracker, Visual Studio.