TIERNAN WATSON

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Penultimate year student with mostly games and computer graphics experience looking for an internship where I can learn a lot and challenge myself within the games industry

Technical Skills

Languages: C++, C#, C, Java, Python, SQL, PHP, HTML, CSS

Tools: Visual Studio, Git, Unity, Unreal Engine 4, SQL Server, some Vuforia, some CUDA

Education

University College London (UCL) – MEng Computer Science **Sep 2017 – Jun 2021**

- Averaging a 1st in computer science modules
- Team leader on first and second-year projects, achieving a 1st in both
- Computer Graphics: achieved *100%* for ray tracer coursework, and *95%* for real-time rasterization
- Discrete Mathematics: achieved *81%* (first-class) which includes linear algebra and calculus

Banbridge Academy – 5 A-Levels (A*A*AAB) **Sep 2015 – Jun 2017**

- Mathematics, Further Mathematics, Software Systems, Physics, Biology
- Awarded for top results and achievement
- Self-taught Further Maths including statistics & only student to take 5 A-Levels

Relevant Employment

GOSH DRIVE NHS Foundation Trust – Software Engineer Intern **Jul 2019 – Sep 2019**

- Developed an Android virtual pet augmented reality (AR) app for young patients using Unity
- Independently designed a visual scripting system using C# reflection, SQL Server and a .NET Core Web API
- Participated in verbal stand-up meetings and wrote documentation for future developers

UCL Institute of Child Health – Software Engineer Intern **Jun 2018 – Aug 2018**

- Debugged and developed Unity games for cystic fibrosis devices
- Participated in stand-up meetings with Microsoft engineers and MSc students

Selected Projects https://tiernanwatson.com

Odyssey Game Engine (Data-Oriented)

- WIP C++ game engine; custom memory allocators; programming custom 3D renderer; using data-oriented design including ECS; unit testing

URaider (Unity)

- Tomb Raider framework for Unity that allows users to create levels; includes expected gameplay actions
- Designed an automatic ledge-targeting system with physics knowledge
- Designed a state machine to manage the large amount of possible player states

2178: Resistance (Unity, Sumo Digital Rising Star Finalist Entry)

- Third-person shooter prototype built for Search for a Rising Star 2019; high scorer in C++ assessment
- Rope swinging system implemented with simple harmonic motion

Portals (Unity)

- Replicated the portal effect from Valve's Portal game; perspective is accurate, and player can walk through

Activities

Hackathons: UCL PixelJam Gaming (2017), Search for a Rising Star (Finalist) (2019), Search for a Star (now) (2020)

School: Programming Tutor (now), Technology Society (now), School Prefect (2016 – 2017), Python Tutor (2016)