Jed Walton

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Education

- **University Of Sussex** — Brighton, United Kingdom
  BSc (Hons) - Computer Science and Artificial Intelligence; Degree Classification: 2:1 — *October 2017 - June 2021*

  Courses: *Introduction to Programming, Mathematical Concepts, Programming Concepts, The Ghost in the Machine?, Data Structures & Algorithms, Further Programming, Introduction to Computer Systems, Databases, Natural Language Engineering, Program Analysis, Software Engineering, Compilers and Computer Architecture, Acquired Intelligence & Adaptive Behaviour, Computer Vision, Software Engineering, Fundamentals of Machine Learning, Knowledge and Reasoning, Human-Computer Interaction, Neural Networks, Web 3D Applications, Individual Project.*

Skills Summary

- **Languages**: Java, Python, C++, C#, SQL, HTML/CSS, LaTeX
- **Frameworks**: Spring Boot, JUCE, Unity, PyTorch, Hardhat
- **Tools**: Kubernetes, Docker, Git, Hibernate, PostgreSQL, SQLite
- **Platforms**: Linux, Windows, AWS(EC2, Lambda), GCP(Cloud Run)
- **Soft Skills**: Communication, Time Management, Deep Work, Ownership

Experience

- **Software Engineering Group Project** — University Of Sussex
  Student Project Participation graded 77/100, 1st. — *Jan 2020 - May 2020*
  - **Monopoly Spin-off, 'Property Tycoon' written in C# for Unity**: Took ownership for the success of the project through covid related disruptions by ensuring all core property tycoon game logic was implemented as per the specification and maintained a steady line of communication with the team.

Projects

- **Ray Traced Reverberation Chamber - University Of Sussex Dissertation graded 72/100, 1st. (C++, JUCE)**: Researched, designed and implemented a ray traced reverberation chamber from scratch to form a 'good quality' working prototype. (June '21)
- **Recipes (Java, Spring Boot Security, H2 database, JSON)**: Created a multi-user web service with Spring Boot that allows storing, retrieving, updating, and deleting recipes. (March '22)
- **Genetic Algorithms and Vehicles (Python)**: Investigated both a simple low-intertia wheeled robot in simulation, and active vision. Implemented a number of elementary Braitenberg Vehicle architectures and developed an agent-environment simulation. (May '20)
- **File Type Analyzer (Java)**: Developed a file type analyzer exploring Naive, Knuth-Morris-Pratt, and Rabin-Karp search strategies. (March '22)
- **Cinema Room REST Service (Java, Spring boot, JSON)**: Developed a simple Spring REST service to help manage a small movie theatre, handle HTTP requests in controllers, create services and respond with JSON objects. (March '22)
- **JSON Database(Java, JSON, Sockets)**: Created a parallelized client-server application that allows the clients to store their data on the server in JSON format. (June '22)
- **Neural Networks CIFAR-10 (Python, PyTorch)**: Report documenting implementation of a deep neural network with an input layer, three hidden layers with ReLu non-linear activation and an output or classification layer. (May '21)
- **Battleship (Java)**: Developed a simple 2 player CLI battleships game. (June '22)
- **Simple Banking System (Java, SQLite)**: Developed a simple banking system with database and command line interface. (April '22)

Honors and Awards

- **JetBrains Academy**: Certificate Of Completion for Java Developer and Java Backend Developer Tracks. Total 473 topics, 10 Projects and solved 1903 problems - August and June respectively, 2022
- **RSL Awards, Drums**: Grade 8 with distinction. - July, 2017

Hobbies and Interests

- **Hobbies**: I play drums daily, maintain a keen interest in sports & exercise physiology, train Brazilian Jiu-Jitsu, and workout six days per week whilst listening to audiobooks, podcasts and lectures. More casually, I enjoy Bouldering, Swimming, socializing and more.
- **Artificial Intelligence and Blockchain technologies**: I am captivated by the potential of both reinforcement learning and distributed ledger technologies and enjoy exploring the adjacent possible.
- **Optimization**: I am passionate about making incremental improvements in ability to produce in terms of both quality and speed. This is often through deliberate practice to increase proficiency with tools, software engineering best practices, time management, planning, teamwork, ownership, languages, frameworks and even more generally, conditioning the mind and body to produce deep work.