David Ogunlesi

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SKILLS

C#, Python, Javascript, C++, HTML/CSS, Java, PHP, ReactJS, Django, Openai API, Unity, VR Development, Prompt Engineering, Game Development, Software Development, Web Development, Graphic Design

EXPERIENCE

- **Plasmarc Studios** — London, UK
  Game Studio Director & Software Engineer — *Oct 2020 - Present*
  - **Startup**: Built a team of 5 over 3 years by founding a company to support the development of a video game project called "Containcorp" coded in the **Unity Engine** framework using **C#**, **ReactJS (UI)**.
  - **Teamwork**: Achieved an average Lead time of **3 hours**, completing 100 tickets within 2 months, working within a team of developers, using Kanban board, MOSCOW priortisations and agile sprints.
  - **Community**: Launched a small but growing Discord community with 100+ members. Earnt **£400+** revenue off Patreon page
  - **Website**: Developed a responsive website in 3 weeks to promote the game, leading to 20 new community members over 2 months.
  - **Dedication**: Continually push regular update blogs amassing 60+ blog posts detailing development.
  - **Algorithms**: Game relies on complex and novel algorithms to model simulation systems. Implemented **A* pathfinding algorithm** for NPC simulations with support for multi-floor pathing. Implemented **Room Detection algorithms**, Fluid Dynamics simulations using custom **Cellular Automata** model, and **Novel Utility AI** implementation for NPC decision making.
  - **Complex Architecture**: Game acts as a dynamic C# loader, loading the main logic as an external modifiable (a mod) asset into the game, loading DLLs and resources.

- **Ansham Associates LTD** — Folkstone, UK
  Architect Assistant/Python Developer — *2017*
  - Spearheaded an initiative to develop software to monitor and model comprehensive housing data.
  - Achieved a remarkable 20% improvement in data accuracy and efficiency within a tight 6-day deadline, surpassing project expectations and specifications.
  - Commended for excellence in research and development, showcasing a meticulous 5-page documentation of the project's innovation and impact.

PERSONAL PROJECTS

- **2023. Portfolio Website**: Created portfolio website, showcasing web development skills and projects, garnering 100+ views within the first month of launch.
- **2023. Voice Interactable GPT ChatBot**: Achieving a near-conversational average latency from prompt to response under **4 seconds** through successfully prototyping a **Chatbot**. Uses **OpenAI's whisper** for speech-to-text, **OpenAI's GPT3** as its brain that and **ElevenLabs** for text-to-speech
- **2023. GPT-powered AI Discord Bot**: Successfully prototyped a **GPT-powered Discord Bot**, achieving human resemblance in trials, using **OpenAI's GPT3** created in **Python** with the goal of mimicking human-like interactions with users.
- **Ongoing. Bartending Story Game**: Creating a bartending visual novel game in Unity Engine in my spare time, with hopes to release by the end of 2025.
- **2023. Card Party Game Mobile App**: Created a multiplayer mobile app for a card game I designed, using **ReactJS** framework for frontend and **Node-JS** and **Socket.IO** for backend hosted on **AWS**.
- **2022. Flow IDE**: Created a python based VIM-like **command line IDE**.
- **2020. C# Galaxy System Simulation**: Demonstrated exceptional problem-solving skills to produce "realistic" planet surfaces using stacked noise functions with the creation of a C# Galaxy System Simulation, simulating a 100+ star galaxy system with celestial bodies using Unity Engine. Implemented procedural generation of planetary systems, adhering to density wave theory and utilizing 3-dimensional rotation matrices on oblate spheroid equations.

Degree Projects

- **Year 4 Dissertation Project**: Contributing to the advancement of AI-powered game development for more engaging player experiences through an ongoing project exploring the integration of **GPT-powered NPCs** in **Virtual Reality gaming**. Developing a framework that enhances NPC interactions with long-term memory, autonomous behaviour, and realistic dialogue generation. Employing advanced AI techniques, including emotion modelling, to create immersive characters. Evaluating the project's impact through extensive surveys and **Turing Tests**, with a focus on mimicking human likeness.
- **71% Year 3 Dissertation Project**: Found tangible solutions for ageing populations by expanding the Sugarscape simulation model to include altruism, and investigating its impact on an ageing population in Japan. Implemented In **Python**.
- **100% Python 3D OpenGL Engine**: Achieved full marks creating a 3D engine using **Python** and **PyOpenGL**. Implements **ECS, LOD terrain**, **Gerstner Waves** and **dynamic sound**.
- **84% Project Manager and Frontend developer for "Catpocalypse" Pokemon Go-inspired Web game**: Achieved above average amongst peers, with an 84% grade as project lead to build a web app with **ReactJS and Django**. **Project Manager**, main Asset Artist and **main Frontend developer**.
- **90% "Boxify" Java File Compressor**: Achieved optimal speeds on compressing large files averaging 200-300kb/s with a Multithreaded File compressor built with a **Swing** user interface in **Java**.

Relevant Education

- **University of Exeter [Expected Grad. June 2024]** — Devon, UK
  Integrated MSci Computer Science; Target: First class honours — *Sep. 2020 – June. 2024*
  - **Grades**: **Second-year**: 77.88% overall grade. **Third-year**: 71% overall grade.
  - **Relevant Module Grades**: **ECM3423 Computer Graphics** - 100% **ECM1400 Programming** - 84% **ECM1414 Data Structures and Algorithms** - 73% **ECM1400 Web Development** - 78%

OTHER EDUCATION

- **Saint Olaves Grammar School** — Grad 2020
  A Levels: Physics - B — Biology - B — Math - B. — *2018 – 2020*

- **Saint Olaves Grammar School** — Grad 2018
  GCSEs — *2013 – 2018*
  - **Grade 9 (A*+)**: Physics, English Language
  - **Grade 8 (A*)**: Biology, Chemistry, History, Computer Science
  - **Grade 7 (A)**: Math, English Literature, Art

Other Experience

- **Scope** — Orpington, UK
  Store Assistant — *2018*
  - Volunteered at a charity shop for 6 months learning useful management and organization skills.