Enosh Earnest

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A Computer Science student and a true believer in bringing beauty through code, I build applications that are not just functional, but also captivating to use. My passion lies in developing dynamic front-end experiences through instinctive UI/UX design, and building robust backend solutions with Python. My work thrives where technical rigour meets human complexity, crafting systems that amplify rather than automate judgement.

TECHNICAL SKILLS

Languages: Python, JavaScript (ES6+), HTML5, CSS3, SQL.

Machine Learning & AI: Applied scikit-learn for predictive modeling; explored ethical AI development, prompt engineering, and generative AI tools.

Web & Cloud: Microsoft Azure, Django, Vue.js, p5.js (Gen Art & Animation), Netlify (CI/CD Deployment), CSS, HTML, Bootstrap, Flask, Node.js.

Databases: SQL Server, MongoDB Atlas, SQLite.

Tools: Git, Figma, Jupyter Notebooks, DaVinci Resolve, MongoDB Compass.

Concepts: Object-Oriented Programming (OOP), Frontend Performance Optimization, Software Testing, Agile/Scrum, UI/UX Design, Accessibility Principles.

EDUCATION

University of Derby

Bachelor of Science (Honours) in Computer Science **Expected: Sep 2026**

Relevant Campus Coursework: Functional Programming, Computational Mathematics, Network System Development, Software Engineering, Games Technologies, Data Driven Systems.

Relevant Off-Campus Coursework: The Complete Python Bootcamp (*Udemy*), Machine Learning with Python (*LinkedIn Learning*), AI Essentials (*Google*), Fundamentals of UI/UX Design (*Microsoft Learn*).

Organisations: Computing Society, Christian Union, DCCYA, Rolls Royce Technology Hub Derby.

PROJECTS

Windowpane - My Personal Generative Art Portfolio | *Vue.js (Vite), p5.js, CSS3, Netlify* View Site GitHub

- Engineered a fully responsive single-page application (SPA) using Vue.js, built on a **"Digital Cathedral"** theme. Developed a custom generative p5.js animation featuring procedural waves and aquatic life, with over **10 configurable parameters** controlling the physics and aesthetics of the scene.
- Designed and implemented an interactive **"Liminal Mode" easter egg**, which, upon activation, dynamically transitions the entire site's theme. This system manages real-time changes across 2 distinct color palettes and **modifies over 5 core p5.js animation parameters**, including wave height, position, and swell to shift the site from a "Deep Sea" to an "Underwater" aesthetic.
- Implemented a high performance preloading sequence using CSS transforms to animate 4 border elements and 2 text elements sequentially, **eliminating content layout shift** (CLS). Optimized the main UI with over **8 distinct, staggered CSS animations** for content transitions, creating a fluid and responsive user interface.

SEEC - A Public Transport App for the Visually Impaired | *React Native (Expo), Node.js, Express.js, Google Maps/Directions API, Expo AV* GitHub

- Developed a voice-controlled mobile application tailored for **Journeo Plc** to assist visually impaired users in navigating bus journeys, integrating **Google Directions API** and real-time location tracking **via Expo Location** to achieve **95% accuracy** in route generation and **90% adherence** to turn-by-turn guidance.
- Integrated an image-to-text feature using the Google Vision API, processing camera or gallery images to achieve **98% OCR accuracy** and convert physical signs into an audible format for users.
- Reduced navigational anxiety for visually impaired users by **25%** by implementing a dynamic **voice feedback system using Expo Speech**, which also improved ease of following instructions by **30%** during user acceptance testing.

SnapBack - An Employee Fatigue Monitoring Platform | *Python, Flask, SQLite, Pygame* **GitHub**

- Built a role-based web app with distinct dashboards (Employee, Manager, HR) and **15+ routes**, integrating fatigue scoring from **4 cognitive games and daily wellness surveys**, enabling real-time fatigue tracking for **25+ users across 3 teams.**
- Engineered and deployed 4 accessible games (reaction test, visual oddity finder etc.) using Pygame, with real-time score submission via Flask API, tracking **500+ session metrics (reaction time, accuracy, fatigue, decision making) across 10 simulated days.**
- Implemented team fatigue trend analytics with Chart.js, dynamic SQL joins, and threshold-based alerts (<40 fatigue score), generating real-time insights for managers with **<150 ms dashboard render time** and 100% session log retention.

Pandemic Resilience Management System | *Python, Flask, SQL Server, MongoDB Atlas, HTML/CSS* **GitHub**

- Engineered a secure role-based web platform with 3 dashboards and 20+ endpoints using Flask and SQL Server, enabling authentication-based access via Flask-Login and supporting over **500+ dynamic data operations** across structured and unstructured sources.
- Developed a hybrid data architecture integrating SQL Server for compliance-critical data and MongoDB Atlas for semi-structured & instantaneous data, executing **complex joins and aggregations across 7 tables and collections** with <100 ms query response under load.
- Implemented secure password hashing (PBKDF2 via Werkzeug), vaccination validation logic, and automatic compliance alerts, achieving **100% password encryption compliance** and improving error handling and data consistency across all users by **~80%**.

Secure Smart Home Client-Server System | *Python, asyncio, SQLite, PyCryptodome* **GitHub**

- Engineered a high-performance client-server system supporting secure communication with **AES-CBC encryption, Diffie-Hellman key exchange, and multi-client architecture**, handling 10+ concurrent clients and encrypting **500+ messages** with zero errors.
- Implemented advanced features like connection **timeout handling** (30s idle disconnection) and a **heartbeat mechanism**, ensuring **98% reliability** in maintaining active client-server communication during extensive testing.
- Implemented a **command processing pipeline** capable of handling **over 100 client requests per second**, with **99.9% accuracy** during stress tests conducted over a **48-hour period**.

EXPERIENCE

Designer (Intern) - University of Derby Enterprise Centre **Mar 2024 - July 2024**

Keywords: Template Designing, Content creation, Database management, MS Dynamics

Tools: Davinci Resolve 19, Canva, MS Excel, Microsoft Dynamics 365

- Created an average of **13 new digital content templates** to be integrated into newsletters, chats, LinkedIn feeds, and in-person presentations, streamlining future content creation.
- Updated CRM records for up to **400 individuals**, optimising data organisation and enhancing the efficiency of internal processes for smoother client management.
- Updated and refined **up to 8 databases** to ensure **accuracy, consistency, and data normalisation**, improving user-friendliness, accessibility options, and encryption.

Marketing/ Communications (Intern) - Not Another Agency **Jan 2023 - June 2023**

Keywords: Social Media management, Performance marketing, Ad analytics

Tools: Meta Business Suite, Google Analytics, Adobe Photoshop

- Managed up to **6 organisations** across various platforms **(Facebook, Instagram, Twitter, LinkedIn, YouTube, TikTok)**, an NGO focused on postpartum depression.
- Achieved a **30% increase** in follower count for a luxury villa through **strategic content creation and targeted campaigns.**
- Curated a **3x increase** in ad frequency for an NGO dedicated towards under-privileged youth, significantly boosting engagement and helping the organisation reach a wider, more relevant audience.