

Archie Hearn

MSc Computer Science candidate and independent software/game developer with hands-on experience building AI-enabled simulations, browser-based machine-learning tools, data pipelines and cloud-backed web applications. Combines Python, Java, JavaScript with Unreal Engine 5, AWS and applied ML. Customer-facing and trade experience has strengthened my communication, adaptability and practical systems thinking, while a Psychology background supports research and human-centred analysis.

Technical Skills:

Programming: Python, Java, JavaScript/TypeScript, SQL, HTML and CSS

AI / ML: scikit-learn; k-NN; logistic regression; random forests; XGBoost; PCA; k-means; feature engineering; model evaluation; local LLM inference; structured outputs

Game / Simulation: Unreal Engine 5, Blueprints, formation systems, AI behaviours, procedural systems, spline movement and performance-aware unit architecture

Backend / Cloud: Node.js, Express, FastAPI, REST APIs, AWS, DynamoDB, S3, CloudFront, PostgreSQL, MongoDB, JWT and bcrypt

Tools: Git, GitHub, Gradle, Scapy, Ollama, SVG and data visualisation

Technical Experience:

Independent Game & AI Developer — War's Crucible

2024–Present

Self-employed | Unreal Engine 5, Blueprints, Python, local LLMs

- Design and implement a musket-age real-time strategy game covering formation combat, persistent armies, courier-delayed orders, battlefield visibility, logistics and procedural campaign systems.
- Built a local language-model command pipeline using Ollama/FastAPI and structured JSON so written player orders can be translated into validated unit behaviours inside Unreal Engine.
- Architected unit-level movement with per-soldier state for large formations, including spline-based manoeuvres, routing, line-of-sight and map-to-world coordinate systems.
- Created historical infantry-behaviour datasets and evaluated logistic regression, random forest and XGBoost classifiers, alongside PCA/k-means analysis, to support tactical AI experimentation.

Software & AI Developer — World's Dispatch

2026–Present

Independent project | Python, JavaScript, Node.js, AWS, DynamoDB | WorldsDispatch.com

- A global geopolitical intelligence platform combining country-specific political news, economic developments, exports, risks, elections, prediction markets and government-source data.
- Developed Python scraping and analysis pipelines with per-country deduplication, daily snapshots of country news, scheduled processing and weekly synthesis across a large multi-source dataset.
- Implemented a Node.js AWS sidecar and verified DynamoDB profile read/write flows using AWS SDK v3; designed the wider user-account and

Education:

MSc Computer Science — University of London

- Coursework and independent study span software engineering, machine learning, Java development, databases, cloud systems and AI integration.
- Applied MSc learning directly through the Java interpreter, historical ML datasets, backend services and production-oriented portfolio projects described above.

BSc Psychology — University of Kent

Research methods, statistics and human behaviour

- Developed a foundation in experimental design, quantitative analysis and human-centred interpretation that informs product design and AI-system thinking.



github.com/archiehearns



archiehearn.com



linkedin.com/in/archiehearn



archiejhearn@gmail.com

Experience:

