

[Name]

AI Application Engineer

[Location] |
[portfolio] | [LinkedIn] | [GitHub]

EDUCATION

[University]

[Location]

BSc (Hons) Computer Science, First Class Honours

Sep 2023 – Jul 2026

- Thesis: *AI-Assisted Video Editing: Evaluating Efficiency and Usability in Short-Form Content Production*. Designed and evaluated a full-stack clip editing tool through a within-subjects user study measuring task completion time, SUS usability, and NASA-TLX cognitive workload.

PROJECTS

Twitch Clip Editor

Python, FastAPI, Next.js, React, TypeScript, Tailwind CSS, Whisper, Ollama, FFmpeg

- Full-stack web application converting Twitch clips to vertical 9:16 short-form videos; adopted by 10 active Twitch streamers following a 30-user beta.
- Formally evaluated against a manual baseline: all participants completed the task using the tool; none finished within the time limit doing it manually.
- Built subtitle generation via OpenAI Whisper, automatic layout detection via LLaVA through Ollama, three configurable layout modes, a live caption editor, and automated metadata generation (titles, hashtags, summaries) with Twitch OAuth.
- Backend: FastAPI and Uvicorn. Frontend: Next.js 16, React 19, TypeScript. Video processing: FFmpeg and yt-dlp.

ShimaTTS

Python, FastAPI, F5-TTS, PyTorch, pywebview, Twitch EventSub API

- Local Twitch TTS alert desktop app with AI voice cloning – no cloud, no subscriptions.
- Clones a voice from a 10–30 second audio sample using F5-TTS on GPU (PyTorch); channel point redeems are spoken in the cloned voice in real time.
- Twitch EventSub WebSocket integration for live channel event handling; animated OBS browser source alert overlay with viewer name and message.
- Native desktop UI via pywebview with FastAPI backend; voice and GIF libraries with in-app previews, TTS queue, test alerts, and system tray support.

Video Storyboarder

Python, Gradio, Whisper, Ollama, LLaVA, Llama 3, ComfyUI, Stable Diffusion XL, LoRA

- Pipeline that generates a structured storyboard and teleprompter script from a YouTube creator's video intro.
- Transcribes audio with Whisper, analyses video frames with LLaVA via Ollama, and generates storyboard content with Llama 3.
- Renders sketch-style storyboard panels using ComfyUI with SDXL Base and a custom-trained LoRA fine-tuned on storyboard sketch imagery.
- Served via a Gradio web UI with structured JSON and Markdown output for storyboard and script artefacts.

Bindings of NopeYep

JavaScript, HTML5 Canvas, Web Audio API

- Browser game built entirely in vanilla JS and HTML5 Canvas; shipped as a single self-contained HTML file with no build tooling or dependencies.
- Delta-time game loop with DPR-aware Canvas renderer, particle system, and procedural audio via Web Audio API.
- Multiple enemy types with distinct AI state machines, a phased boss fight with telegraph mechanics, and room-based progression with skill upgrades.

EXPERIENCE

Teaching & Administrative Assistant

[Location]

[Primary School]

Summer 2023

- Supported classroom activities and assisted teaching staff in a fast-paced educational environment.
- Communicated with children, parents, and colleagues across a range of situations, adjusting tone and approach as needed.
- Managed administrative tasks and kept organised records with attention to detail.

TECHNICAL SKILLS

Languages: Python, TypeScript, JavaScript, HTML, CSS, SQL

Frameworks & Libraries: FastAPI, Next.js, React, Tailwind CSS, Gradio, Pydantic

AI & ML: OpenAI Whisper, F5-TTS, Ollama, LLaVA, Llama 3, ComfyUI, Stable Diffusion XL, LoRA fine-tuning

Tools & Platforms: Git, GitHub, FFmpeg, yt-dlp, REST APIs, OAuth 2.0

Specialisation: LLM Pipelines, Multi-Model Orchestration, Computer Vision, API Design, Full-Stack Development