

Viktor Sharha

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EDUCATION

University of Edinburgh

BEng Computer Science

Edinburgh, Scotland

Sept. 2024 – Expected Graduation: May 2028

EXPERIENCE

VDrive Chip, Key & Diagnostics

Car Electrician/Mechanic Business

June 2025 – Present

Edinburgh, Scotland

- Established complete business infrastructure from incorporation through operational launch, including HMRC registration, banking setup, and accounting system implementation
- Developed comprehensive brand identity, custom website with integrated booking systems, and multi-platform digital presence
- Recovered 6+ months of historical financial records by engineering a custom extraction tool, enabling accurate financial reporting

Standard Life

Career Ready Internship

June 2024 – July 2024

Edinburgh, Scotland

- Curated questions for a market research study
- Produced data visualizations that highlighted trends for internal market research
- Selected suitable new content for an app
- Presented to a group of potential future users

AWARDS & HONORS

First Place, OpenEuler Challenge

Samantha OS Assistant

January 2025

Edinburgh, Scotland

- Developed a conversational AI terminal assistant for openEuler OS, enabling natural language system operations and multi-tool orchestration.
- Awarded first place among international participants for innovation and technical excellence.

PERSONAL PROJECTS

Samantha OS Assistant | *Python, Gemini API, openEuler Linux, Natural Language Processing*

January 2025

A conversational AI terminal assistant that translates natural language into system commands

- Built an intelligent CLI assistant supporting natural language operations including file management, search, system analysis, and multi-tool orchestration for openEuler OS.
- Architected modular tool system with extensible base classes for specialized capabilities (image fetching, web requests, directory analysis) and dynamic prompt construction for AI-driven command generation.
- Implemented self-correction and failure recovery mechanisms with conversation memory, enabling the AI to learn from errors, retry alternative approaches, and maintain context across multi-turn interactions.
- Designed safety layer with automatic confirmations for destructive operations, command visibility pre-execution, and sandboxed execution with user-space permissions.

WordsFrequency-POS | *Python, Bash, Data Pipelines*

September 2025

Cross-lingual frequency + POS dataset pipeline with normalized outputs and reproducible automation

- Created an automated ETL pipeline to merge multilingual word-frequency and POS datasets, enabling downstream NLP research and analysis (Python, Bash).
- Merged word-frequency with part-of-speech/morphology to enable queries by POS ordered by frequency for downstream NLP tasks.
- Automated end-to-end runs with CLI scripts and env-based config; implemented idempotent downloads and resume-safe processing.
- Produced reproducible, versionable artifacts suitable for batch processing and programmatic consumption.

Wordle International | *React, Redux Toolkit, Tailwind CSS, Vite*

September 2025

Multilingual Wordle with configurable modes and API-backed words

- Implemented configurable modes (word length, attempts) for unlimited play.
- Built a FastAPI random-word service supporting 15 languages; implemented an auto-adjusting on-screen keyboard with locale-aware input.
- Built a responsive Tailwind UI for mobile and desktop with an adaptive grid and touch-friendly controls.
- Managed guess lifecycle, validation, and keyboard state with Redux Toolkit; enabled URL-based configuration via React Router and engineered a client fallback when the API is unavailable.

AI Expense Pipeline | *Python, OpenAI-compatible AI handlers*

August 2025

An automated invoice and receipt processing pipeline with configurable AI-driven extraction

- Built a modular pipeline to ingest PDF invoices/receipts, normalize inputs with OCR, and extract structured expense data using AI-driven prompts.
- Designed YAML-driven configurable passes with carry-forward fields, skip logic, and post-processing rules (joins, length limits, date bounds) for robust normalization.
- Implemented AI orchestration to construct prompts, call multiple providers, and map responses into typed fields; added logging and test scaffolding.

TECHNICAL SKILLS

Languages: Python, Java, C++, JavaScript, Bash, HTML/CSS

Frameworks: FastAPI, React, Next.js, TailwindCSS, Redux

Tools/Other: Git, Linux, OCR, OpenAI API, Cloudflare