

Viktor Sharha

Computer Science student at the University of Edinburgh focused on AI automation, NLP, and full-stack systems.

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EDUCATION

University of Edinburgh

BEng Computer Science

Edinburgh, Scotland

Expected Graduation: May 2028

EXPERIENCE

VDrive Edinburgh

Technical Assistant

June 2025 – Present

Edinburgh, Scotland

- Reduced manual data processing time by 10+ hours monthly by building a Python automation tool that parsed 6+ months of inconsistent transaction records
- Designed brand identity and built a customer-facing booking website with an integrated booking system.

Standard Life

Intern

July 2024

Edinburgh, Scotland

- Designed and analyzed customer survey with 100+ parent and children respondents to identify key financial planning concerns for university-bound students, informing new FAQ content for Standard Life's mobile app
- Recommended 5 priority FAQ topics based on survey insights, presented findings to product and design teams

AWARDS & HONORS

First Place, OpenEuler Challenge

Samantha OS Assistant

October 2025

Edinburgh, Scotland

PERSONAL PROJECTS

GradeIQ | *Next.js, FastAPI, Supabase, AI APIs, Tailwind CSS*

October 2025

AI-powered grading platform for automated assessment of student submissions

- Built a full-stack AI grading platform with Next.js frontend and FastAPI backend, integrating multiple AI providers (Anthropic, Google) with a multi-provider abstraction layer and Pydantic-validated structured outputs.
- Engineered secure backend with JWT authentication, role-based access control, and Supabase integration; designed modular architecture with background task processing and real-time status polling for batch grading workflows.
- Developed responsive UI with Tailwind CSS, shadcn/ui, and Radix UI, featuring dynamic forms, bulk operations, in-browser PDF viewing, and AI-powered mark scheme generation.

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

October 2025

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

- Engineered a command-line interface (CLI) assistant that maps conversational requests to file, search, and diagnostic workflows via Python agents and the OpenAI API, streamlining day-to-day system maintenance.
- Built a modular tool framework with extensible base classes for web fetches, media handling, and directory analysis, enabling rapid addition of new capabilities.
- Enabled self-correction with conversation memory that logs failures, retries alternative strategies, and preserves context across multi-turn tasks to maintain reliability.

Words-FrequencyPOS | *Python, Bash, Data Pipelines*

September 2025

Cross-lingual frequency + POS dataset pipeline powering language-learning and NLP research

- Delivered an automated extraction-transformation-load (ETL) pipeline that merges multilingual word-frequency and part-of-speech (POS) datasets with Python and Bash to support cross-lingual analysis.
- Linked frequency data with POS and morphology metadata to answer POS-specific vocabulary queries for linguistics and natural language processing (NLP) studies.
- Automated end-to-end runs with command-line scripts and environment-based configuration, enforcing idempotent downloads and resume-safe processing.
- Produced reproducible, versioned artifacts ready for batch processing and programmatic integration.

AI Expense Pipeline | *Python, OCR, AI APIs*

July 2025 – August 2025

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

- Constructed a modular pipeline that ingests PDF invoices and receipts, normalizes inputs with optical character recognition (OCR), and extracts structured expense data through AI-generated prompts to speed bookkeeping.
- Designed YAML-driven processing passes with carry-forward fields, skip logic, and post-processing rules (joins, length limits, date bounds) to keep outputs consistent.
- Orchestrated multiple AI providers with structured logging and tests, mapping responses into typed fields for reliable auditing.

TECHNICAL SKILLS

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

Frameworks: React, Next.js, Redux, Tailwind CSS, FastAPI

Tools & Platforms: Git, Linux, Docker, OpenAI API, Cloudflare, Supabase, Netlify