

---

## Experience

---

UNDERGRAD TEACHING ASSISTANT      Sep 2025 – Present  
TA for a first-year module and Programming Tutor at UCL.

---

## Extracurricular

---

UCL COMPETITIVE PROGRAMMING SOCIETY      Nov 2024 – Present  
Founding & committee member and speaker. We host topical lectures, contests, and training sessions with 130 members.

JESS AI CLUB      Jan 2022 – May 2022  
Founder and host of the first purely student-ran club. Its popularity allowed me to introduce NLP theory to 20+ peers.

ACADEMIC RESEARCH      May 2023 – Oct 2023  
Co-authored a [16-page report](#) on water usage in the UAE. This was an initiative under the [Roots & Shoots](#) movement; the results were presented at the [Expo Awards Ceremony](#).

---

## Competitions

---

COMPETITIVE PROGRAMMING      Jan 2025 – Present  
[ICPC: 11th](#) (1st in London) at the 2025 [UKIEPC](#), qualified for NWERC, and training for EUC.  
2nd at the Oct 2025 [Recraft Mini-Cup](#)  
Codeforces: UK 22nd (Nov 2025). Leetcode: 7.61%.

MATHEMATICAL MODELING      Nov 2022; Feb 2023  
Awarded *Meritorious* in [HiMCM](#) and *successful in triage* in [M3C](#). Led and trained my own team. Performed time-series analysis, non-linear and periodic regression, and dynamics modeling using SciPy and Mathematica.

WHARTON GLOBAL INVESTMENT COMPETITION      Sep–Dec 2022  
Team leader. Placed #75 using tactical asset allocation.

REGIONAL MATH COMPETITION      Feb 2023  
[DMSL](#) senior bracket [winning team](#) and MVP.

---

## Projects

---

[gws2](#) ([akioweh.com](https://akioweh.com))      Oct 2024 – Present  
A compact server on continuous deployment prototyped with modern technologies like 0-RTT h3 and reverse proxying.

[OiqBot](#)      Oct 2021 – Present  
Realtime network app with a cooperative concurrency model and modular, hot-loadable plugins. Engineered a non-blocking (de)initialization procedure for quick restarts.

[sheepcalc](#)      Jul 2025 – Jul 2025  
Pure  $\lambda$ -calculus interpreter in Haskell using ADS and Parsec.

[AEQ](#)      May 2024 – Mar 2025  
Python package for analyzing, editing, and generating DSP filters. Supports parametric IIR implemented as cascaded biquads and linear-phase FIR discrete impulse convolution.

Team-based Software Engineering      Oct 2025 – Present  
An academic management system using Spring Boot & JPA with React developed concurrently as a team of three.

---

## Education

---

UCL      2024 – 2027  
BSc Computer Science      Y1: 83.38%

JESS Dubai      2020 – 2024  
GCSEs (11), IB Diploma

---

## Technical Skills

---

ALGORITHMS & DATA-STRUCTURES  
Competition code; Technical analysis

APPLICATION PROGRAMMING  
Concurrency; RDBMS; REST API;  
ASGI; Template programming; Scalable realtime applications

LANGUAGES  
Python (5yr): FastAPI, SciPy, aiohttp  
C++ (2yr): `std` c++23 STL; CMake  
Java (3yr): Maven; JSP & JSTL, Spring  
Haskell (1yr); Lua (1yr); JavaScript (2yr)  
Object-oriented, Declarative, Functional

NETWORKING  
WAN Architecture, Anycast; DNS,  
email security: DNSSEC, DMARC;  
NAT, Subnets; LAN administration

DEVOPS & SYSADMIN  
Cloud infrastructure / VPS, Terraform;  
Enterprise & SE Linux; CI/CD

LOWLEVEL & EEE  
ESP-IDF; UART, I2C; Analogue  
circuit design, Digital design

DATA SCIENCE  
Computational modeling: Time-series,  
Regression, Monte Carlo, Dynamics;  
Visualization; Validation & Forecasting

DEVELOPMENT TOOLS  
Git, CMake; LSP, DAP; MSYS2, Unix;  
NeoVim, JB IDEs, Terminal, SSH

ARTIFICIAL INTELLIGENCE  
Understanding of Self-attention,  
Transformers, Pre-training, Optimizers

TYPESETTING  
 $\text{\LaTeX}$ ,  $\text{\textit{TikZ}}$ ,  $\text{\textit{BibTeX}}$

---

## Misc

---

LIVE AUDIO & VIDEO  
Event audio-visual control & setup;  
Live broadcasting; Live audio mixing

NATURAL LANGUAGES      English, Mandarin