

# KY (Kai Yun) Foo

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## Education

### Imperial College London - Computing (BEng)

SEP 2024-JUN 2027

First year modules: Graphs and Algorithms, Calculus, Linear Algebra, Discrete Maths, Logic and Reasoning

Second year modules: Software Engineering Design, Operating Systems, Designing for Real People, Machine Learning

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## Experience

### Incoming Software Engineering Intern at Visa

JUL 2026-SEP 2026

### Software Engineering, Product Design and Marketing Intern at Neeuro

JUL 2025-SEP 2025

- Contributed to Neeuro Development Portal by developing the first documentation website for the NeeuroOS SDK using YAML, HTML, CSS and TypeScript, building applications with Java, Objective-C and C# for various platforms.
  - Worked on product design for the Shanghai Putuo Hospital Standalone NeeuroFIT system and produced marketing materials for the AI-centered World Smart Industry Expo 2025.
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## Projects

### Cross-compiler for WACC language in Scala

JAN 2026-MAR 2026

- Worked in a team of 4 to develop an advanced multi-phase compiler using Parsley, implementing lexical tokenisation and syntax and semantic analysis with type checking and scope validation, building several ASTs and implementing TAC representation to generate and output Arm32 and AArch64 assembly files.

### PintOS operating system for x86 architecture in C

OCT 2025-DEC 2025

- Worked in a team of 4 to implement a round-robin thread scheduler with non-busy waiting, priority donation, MLFQs, increased support for user programs and implemented virtual memory with a frame table, supplementary page table, and support for memory-mapped files.

### ARMv8 emulator and assembler in C

MAY 2025-JUN 2025

- Lead a group of 4, developing an assembler translating source code into an executable binary file, using a 2-pass architecture, and an emulator simulating its execution on a Raspberry Pi.

### 3D renderer from scratch in C

MAY 2025-JUN 2025

- Worked in a team of 4 to develop a fully functional 3D rendering engine without using any external libraries. Renderer can handle basic 3D object transformations, projections and shading.

### Locally hosted AI decision making app in Python and Typescript

FEB 2025

- Worked in a team of 4 to develop an app that uses a locally hosted LLM to aid SMEs in making decisions with sensitive data, featuring various user profiles with different focuses and contexts.

### 2D role-player video game in C#

SEP 2023-MAY 2024

- Developed a game using Unity with object-oriented methodology, following agile methodology.
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## Technical skills

- Proficient in Java, C, Haskell, Scala, Python, Javascript, YAML, HTML, CSS, Git. Knowledge of Kotlin, C#, TypeScript, Objective-C, SQL, various Assembly languages, and Linux.
  - Fluent in English, working proficiency in Mandarin Chinese.
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## Awards

- Bebras Elite: Gold Award - Top 10% Nationally (2023), Top in School (2022), Gold Award (2022)
  - Senior Maths Challenge: Gold Certificate - Top 11% Nationally (2022)
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## Additional experience

### Organiser, Designer (Branding, Merch and Socials) for ICHack '26

NOV 2025-PRESENT

- Main organiser, designing and curating the branding and merchandise for ICHack '26.

### Webmaster, Social Media Manager for Felix (Imperial Newspaper)

AUG 2025-PRESENT

- Currently working toward implementing online puzzles on the Felix website.

### Lead Organiser, Designer at Ensemble (Socratica)

MAR 2025-PRESENT

- Lead organiser for UK's biggest student-run creative symposium with over 450 attendees.

### Hall Senior, Secretary of Student Accommodation (Imperial College London)

OCT 2024-PRESENT

- Organise committee meetings, plan events and coordinate feedback for over 400 residents.

### Head of Photography Society, Peer Listener, Student Tutor of Wycombe Abbey School

NOV 2022-JUN 2024

- Taught photography lessons, trained by Mind Charity and tutored younger students on subjects.