

Katrina Liu

Philadelphia, PA | (267) 303-2353 | katltn@seas.upenn.edu | linkedin.com/liukatkat/ | github.com/liukatkat | liukatkat.com

EDUCATION

University of Pennsylvania, School of Engineering & Applied Science - Philadelphia, PA **May 2025**
Bachelor of Science in Engineering in Computer Science; Cumulative GPA: **3.98/4.00**
Honors: Deans List 2021-2022

TECHNICAL SKILLS

Java, OCaml, C, Assembly, Python, SQL, R, Swift - iOS, HTML, CSS, Git, LaTeX, Figma, Adobe Suite (Pr, Ae, Ai, Ps, Id, Au)

RELEVANT COURSEWORK

Computer Science: Programming Languages and Techniques, Computer Systems, Discrete Mathematics, Automata, Computability and Complexity, Human-Computer Interaction
Math: Multivariable Calculus, Vector Calculus, Differential Equations, Linear Algebra
Physics: Mechanics and Wave Motion, Electromagnetism and Radiation
Others: Formal Linguistics, Music History

EMPLOYMENT EXPERIENCE

University of Pennsylvania | CIS1200 Teaching Assistant **Sep 2022 - Present**
Philadelphia, PA

- Instructed weekly recitations for a foundational programming course on object-oriented and functional programming and algorithm design, guiding 20 students through complex topics in Java and OCaml.
- Offered one-on-one support to students during weekly office hours, helping them troubleshoot code and understand theoretical concepts.
- Contributed to the Pre-Post committee by designing and updating the course's homework assignments.

Hong Kong University e-Learning Development Laboratory | Textbook Editor **Jul 2022 - Present**
Hong Kong

- Wrote and edited content and exam practice questions for a set of textbooks with over 90% market share for the HKDSE ICT curriculum, covering topics such as Introduction to Python Programming, Intro to SQL, and Database Design.
- Produced and designed illustrations and graphics to communicate complex concepts visually.

Fiverr | Video Editor, Motion Designer, and Graphic Designer **May 2020 - Sep 2022**
Hong Kong

- Edited videos, produced custom motion graphics, and designed social media graphics for 5 clients and received a 5-star rating.

PROJECTS

Human-Computer Interaction Research Project | University of Pennsylvania **Sep 2022 - Present**
Philadelphia, PA

- Gathered and analyzed over 10,000 tweets using the Twitter API and sentiment analysis libraries to evaluate anonymity-related expression under social discourse and discovered new insights on the topic, contributing to the field of social media analysis, human-computer interaction, and online communication.
- Authored a 12-page research paper detailing findings from data extraction and analyses in a team of 5 under Professor Danaë Metaxa's supervision, currently in the submission process to an academic journal.

Distraction Free YouTube | CodePath **Aug 2021 - Dec 2021**
Philadelphia, PA

- Co-created a distraction-free version of YouTube in one-week sprints while incorporating course instructors' feedback.
- Utilized Figma, GitHub, the YouTube API, and Xcode (Swift + Storyboard) for development.

Dementia Care Companion, Language Pop, Unpack | Diocesan Girls' School **Aug 2016 - Jan 2020**
Hong Kong

- Led and collaborated in teams to produce 3 mobile applications over the span of 3 years.
- Received recognition in various competitions including the Grand Prize of the Technovation World Pitch Summit 2017 (as one of the final teams invited to present at the Google headquarters), Silver medal in the International Exhibition of Inventions of Geneva 2019 (as an exhibitor), and the Hong Kong ICT Awards.

LEADERSHIP, VOLUNTEER AND OTHER LEARNING EXPERIENCE

Penn Medical Emergency Response Team **Jan 2022 - Present**
Provided emergency medical care on weekly shifts in the university area.

Media Production Team **Aug 2016 - Jun 2021**
Chaired the team in organizing school filming events and microfilm productions.

Head Prefect **Aug 2019 - Jun 2020**
Led a group of 30 prefects. Facilitated student-school communication.