

Katrina Liu

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

EDUCATION

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

SKILLS

Technical Skills: Java, OCaml, Haskell, C, Python, SQL, Swift, Git, LaTeX, Figma, Adobe Suite

Languages: English, Chinese (Mandarin and Cantonese)

EMPLOYMENT EXPERIENCE

CIS 1200 Teaching Assistant | University of Pennsylvania **Sep 2022 - Present**
Philadelphia, PA

- Instructed weekly recitations for a 200+ student foundational programming course on object-oriented and functional programming and algorithm design, guiding students through complex topics in Java and OCaml.
- Offered one-on-one support during weekly office hours, helping students troubleshoot code and understand theoretical concepts.
- Contributed to the Pre-Post committee by reporting and resolving issues in the course's homework assignments.

Computer Science Textbook Editor | Hong Kong University e-Learning Development Lab **Jul 2022 - Sep 2022**
Hong Kong

- Wrote and edited content and exam practice questions for a set of textbooks with over 90% market share in Hong Kong 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 using Adobe Illustrator to communicate complex concepts visually.

Video Editor, Motion Designer, and Graphic Designer | Fiverr **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.

RESEARCH EXPERIENCE

Observer Project | Penn Undergraduate Research Mentoring Program (PURM) **May 2023 - Present**
Philadelphia, PA

- Fine-tuned a question answering model using synthetic data to automate physician responses to patient portal messages.

Property-based Testing (PBT) Research | University of Pennsylvania **Apr 2023 - Present**
Philadelphia, PA

- Implemented a parser and a generator in Haskell for the Lu language as a workload for Etna, a platform for property-based testing techniques evaluation, with the goal to explore PBT for parsers and round-trip properties.

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

- Analyzed over 10,000 tweets using the Twitter API, sentiment analysis libraries (Vader and TextBlob), and R to evaluate anonymity-related expression under social discourse.
- Authored a 12-page research paper in a team of 5 under Professor Danaë Metaxa's supervision, currently in the submission process to an academic journal.

PROJECTS

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

- Co-created a distraction-free version of YouTube and individually created 4 other mini mobile applications in weekly sprints.
- UI designed with Figma, version control and project planning done using Git/ GitHub. Developed using Swift and Storyboard. Utilized the Youtube, Instagram, and Twitter API.

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

- Led the production of 3 mobile applications which received recognition in various competitions, including the Grand Prize of the Technovation World Pitch Summit 2017, 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 volunteer weekly shifts in the university city area.

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