

KATHARINE MOON VARI

Student ~ Product Developer ~ Engineer

(they/them)

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SUMMARY

Columbia University junior focused on the intersection between technology and the arts. Interested in STEM education and advocacy for women of color.

Languages: English, Spanish (some prior experience in Korean and Chinese)

SKILLS

Programming Languages: Python, Java, C/C#/C++, HTML/CSS, Golang, JavaScript/Sveltekit/Flask, React, and SQL

Technologies: Git, LaTeX, Solidworks, Ableton Live, Blender, Sketch, Fusion 360, Perforce, Jira, Unity

EDUCATION

8/2023 - 6/2027	Junior, Columbia University Fu Foundation School of Engineering and Applied Science (GPA: 3.82, Dean's List)	BS in Computer Science, Minor in Art History
1/2026 - 6/2026	Study Abroad Student, Cambridge University Pembroke College	Computer Science, Classics

Student Organizations:

President of the Asian American Alliance, Hubs/Uprights Lead for Columbia Formula Racing, Digital Collections Lead for WBAR Radio

Relevant Coursework:

Advanced Programming in C, Linear Algebra and Probability, Natural Language Processing, Computer Graphics, CS Theory, Multivariable Calculus, Data Structures in Java, Discrete Mathematics, Data Science

PROJECTS

Summer 2025	Warner Bros. Discovery SWE Internship • Led HBO Max Test Patterns feature development, including video processing with Golang and ffmpeg, and user interface design for video features • Created user journeys alongside product management, asset design, and content discovery engineers • Addressed business needs in customer troubleshooting through UX development and video processing platform • Iteratively designed and implemented feature and video assets through content publishing pipeline	Bellevue, Washington
Summer 2024	Columbia DitecT Lab Research Work • Worked on AI tool to assist pedestrian safety at street intersections through trajectory prediction • Assisted lab's VR visualization development in team of 4 students • Used Unity Engine and developing in C#	Columbia Engineering x Data Science Institute
Spring 2024	Gaming Market Research Externship • Worked collaboratively with other students learning market research principles and doing weekly research projects • Created final market research presentation for company in the gaming space • Developed comprehensive understanding of the gaming industry and the essentials of user psychology/behavior	Mobalytics x Paragon One
2021-2023	SMMR Software (collaborative open-source project) • Developed and launched open-source software venture with two other students • Worked on terminal-based UI and back-end for Safari extension/app Privacy Redirect and BitTorrent client Mabel • Used Swift, Golang, and Git	github.com/smmr-software
Summer 2022	UC Santa Cruz Science Internship Program • Served as team lead on music meta creation project researching and applying the WaveFunctionCollapse algorithm to genre-based music machine learning • Wrote all 400+ lines of code for beat generation in Python, using Ableton Live and Git as well • Conducted original research applying the algorithm to classical and hip hop music for final presentation at the program	github.com/art3misxmoon/rap-pop-wfc
Summer 2022	Mission Bit • Classroom volunteer for Web Design course for underserved students of color in San Francisco • Helped organize lessons in HTML/CSS and provided individual instruction to students • Introduced students to basics of UI design/human-centered product design using Figma	