

KILEY MATSCHKE

+1 (914) 500-3653 | km3496@columbia.edu | [in kileymatschke](#) | [kileymatschke.io](#) | New York, NY 10025

EDUCATION

Columbia University, School of Engineering and Applied Science

Expected Sept. 2025 - Dec. 2026

MS, Computer Science | New York, NY

HarvardX

2024

CS50G: Introduction to Game Development | Remote

Barnard College

Sept. 2019 - May 2023

BA, Computer Science & Psychology | New York, NY

EXPERIENCE

Design Tools Laboratory

Feb. 2026 - Present

Research Assistant

New York, NY

- Lead user study sessions and translate findings into design improvements
- Contribute to the design, development, and evaluation of a web-based creative coding environment
- Co-author a research paper on LLM-assisted creative coding tools, under review at ACM UIST

Barnard College Vagelos Computational Science Center (CSC)

July 2023 - July 2025

Post-Baccalaureate Fellow

New York, NY

- Engaged in self-guided research on video game development and designed games from scratch
- Facilitated weekly Computing Fellow meetings (students who help peers engage with computing)
- Provided weekly logistical and technological support for website development course Pixel @ CSC
- Promoted and oversaw the Center's biweekly workshops and events on interdisciplinary technology
- Designed web pages, campus digital signboards, flyers, Instagram posts, and monthly newsletters

Microsoft TEALS

Jan. - June 2025

Introduction to Computer Science Teacher at the High School of Arts and Technology

New York, NY

- Implemented introductory computer science curriculum on a team of 4
- Taught principles of video game design and development via Microsoft's MakeCode Arcade
- Met for weekly team syncs to debrief and reflect upon successes and challenges in the classroom

Columbia Women in Computer Science (WiCS), CS@BC

Feb. - May 2023

Mentor

New York, NY

- Led meetings with 4 mentees, providing academic and career guidance in STEM fields
- Curated individualized plans for coursework, research, and internships

Barnard College Peer-to-Peer Tutoring

Oct. 2022 - May 2023

Peer Tutor for Computational Linear Algebra & Calculus III

New York, NY

- Organized weekly meetings on linear algebra and calculus with 4 undergraduate students
- Hosted exam and homework reviews, addressing student questions and concerns
- Curated and distributed problem-solving guides to facilitate understanding

Columbia DivHacks

Sept. 2022

Computing Advisor

New York, NY

- Managed Python coding workshops of 10-12 students
- Advised hackathon participants in their projects

Math Mentors

Sept. 2019 - Sept. 2022

Mathematics Tutor

New York, NY

- Traveled monthly with members to host 3-hour tutoring sessions for sixth-grade students

- Communicated with students to review notes, classwork, homework, and past exams
- Instructed in a 3-month accelerated program modified to reflect virtual learning

Soaringwords

Jan. - Sept. 2021

Intern

Remote

- Directed a team of 5 to launch 13 psychology-based workshops and corresponding workbooks
- Assisted CEO & founder Lisa Buksbaum with manuscript creation and managerial tasks
- Interviewed and onboarded new interns and full-time employees

RESEARCH PROJECTS AND PRESENTATIONS

The Humor Project

Jan. 2026 - May 2026

- Built a full-stack system to collect and analyze human feedback on AI-generated captions
- Developed a public voting app, admin dashboard, and prompt testing tool to support large-scale evaluation and iteration of humor models
- Conducted user studies and applied insights to improve usability and accessibility

The Nutty Arcade: Gamifying Squirrel Census Data - NYC Open Data Week 2025

Oct. 2024 - Mar. 2025

- Used Figma, Excel, and Lua/LÖVE to create a 2D data interface visualizing squirrel populations across NYC
- Presented an open workshop on the intersection of data visualization and game development/design

Picnic Ant-ics

Oct. 2023 - June 2024

- Independently developed a 2D video game in Lua/LÖVE
- Employed Procreate to design custom assets, sprite illustrations, scenery, and animations
- Refined interaction mechanics (motion, physics, object manipulation) based on user feedback

Jamming with Environmental Data - NYC Open Data Week 2024

Oct. 2023 - Mar. 2024

- Analyzed NYC DOE energy usage data in Python to explore patterns in building performance
- Presented an open workshop and data jam on creative, interactive approaches to working with data

Meal Pals

Sept. - Dec. 2022

- Designed and prototyped a mobile application for social meal coordination
- Collaborated with teammates to conduct usability tests, analyzing user behavior to inform design iterations
- Designed user flows, wireframes, prototypes, and a demo using Balsamiq, Figma, and HTML/CSS

ACADEMIC HONORS

Barnard College Psychology Senior Capstone: Pass with Distinction

May 2023

Barnard College Dean's List

Fall 2019, Fall 2020, Spring 2021, Fall 2022

CERTIFICATIONS

HarvardX CS50G: Introduction to Game Development

July 2024

VOLUNTEER AND COMMUNITY SERVICE

READ 718

July 2024 - Present

Literacy Tutor

Remote

- Direct individual reading lessons with an elementary school student 2 times per week
- Generate weekly reports with attention to improvements in literacy and fluency
- Convey academic progress and areas for improvement to program staff and the student's family

Broadway Community Soup Kitchen

Jan. - May 2023

Volunteer

New York, NY

- Cooperated on a team of 5 to prepare and serve nutritious meals to those in need
- Maintained clear communication with diners and attended to requests

- Cleared tables, stacked chairs, and washed dishes and equipment at the conclusion of each shift

Believe New York Philanthropies

Jan. - July 2022

Mental Health Counselor

Remote

- Conducted weekly Open Space sessions as a therapeutic outlet for global clients
- Investigated and imparted relevant resources to best serve clients' needs
- Managed organization-wide records, emails, and voice messages

Community of Volunteer Educators (COVE)

Apr. 2020 - Sept. 2021

English Instructor

Remote

- Led 60+ remote tutoring sessions for middle school students during the COVID-19 pandemic
- Developed personalized lesson plans in English grammar, reading, and writing

Community of Volunteer Educators (COVE)

July 2020 - Aug. 2021

Logistics Administrator

Remote

- Monitored organization-wide Slack channels, Google Drive, and emails
- Paired remote tutors with students and handled tutor-family communications
- Assisted with onboarding new administrators via orientations
- Attended weekly team-specific and organization-wide meetings

EXTRACURRICULAR ACTIVITIES

Flow Columbia

Aug. 2020 - May 2023

Director of Marketing Board

New York, NY

- Piloted meetings with 15 members regarding menstrual health-related events and outreach
- Generated graphics highlighting the club's mission to de-stigmatize menstruation and fight period poverty
- Upheld the club's digital presence on Instagram and Facebook

Barnard Athena Digital Design Agency (ADDA)

Sept. 2021 - May 2022

Community of Practice Member

New York, NY

- Met accelerated deadlines for deliverables, such as user research, interviews, and prototyping
- Contributed to weekly discourse surrounding technology as a tool for social change and action
- Progressed toward MVP of a nail art website meant to inspire and empower global creators

Barnard McIntosh Activities Council (McAC)

Sept. 2019 - May 2022

Community Committee Member

New York, NY

- Convened weekly to plan events that promoted community among Barnard students
- Organized campus traditions such as Midnight Breakfast, Big Sub, and Spirit Week
- Performed outreach to campus members through social media, emails, and flyers

SKILLS

Programming Languages: Python, JavaScript, Lua, Java, C

Web Development: React, Next.js, HTML, CSS, Tailwind CSS

Databases: PostgreSQL, Supabase

Game Development: Lua, LÖVE

Tools & Technologies: Git, LaTeX, Google Gemini CLI, Figma, Balsamiq, Canva, Google Workspace, Microsoft Windows

Additional: Teaching, Mentorship

HONORARY SOCIETIES

Psi Chi: The International Honor Society in Psychology

Nov. 2022 - Present

REFERENCES

1. **Rebecca Wright**
Druckenmiller Professor and Chair of Computer Science
Director, Vagelos Computational Science Center
Barnard College
Email: rwright@barnard.edu
Phone: +1 (212) 853-0219
Relationship: Previous Director
2. **Saima Akhtar**
Senior Associate Director, Vagelos Computational Science Center
Barnard College
Email: sakhtar@barnard.edu
Phone: +1 (734) 657-7824
Relationship: Previous Supervisor
3. **Tony Dear**
Lecturer and Faculty Director, Computer Science Department
Columbia University
Email: tony.dear@columbia.edu
Phone: +1 (212) 853-8466
Relationship: Undergraduate Professor
4. **Kenneth Light**
Senior Lecturer, Neuroscience & Behavior and Psychology Departments
Barnard College
Email: klight@barnard.edu
Phone: +1 (212) 854-9035
Relationship: Undergraduate Professor and Senior Capstone Advisor