

Rachel Park

rpark02@mit.edu | rachel.jupark@gmail.com

[Linkedin](#)

213-841-3396

Professional Interests:

I am interested in creating technologies that help to better understand human behavior. I am especially passionate about developing technologies that can alleviate problems within the health field. Furthermore, I believe that it is crucial for engineers to understand user experiences and actively incorporate their feedback with creating technologies.

Focus Areas: Full Stack Developer, UI/UX Developer, UX Researcher, Health Tech, App Development, Web Development, Data Analysis, Data Visualization

Education:

Masters of Engineering Computation and Cognition | 2026

Massachusetts Institute of Technology

Bachelor of Science in Computation and Cognition | 4.9 GPA | 2024

Minor in Business Management

Massachusetts Institute of Technology

International Baccalaureate Diploma Programme Member and Diploma Recipient | 2018 - 2020

Skills:

- **Programming Languages:** Python, TypeScript, HTML, CSS, JavaScript, Swift, SQL
- **Tools and Frameworks:** React Native, Angular TypeScript, Tailwind CSS, Bootstrap, Node.js, Pandas, PuLP, GLPK, Amazon RDS, MySQL, GitHub/GitLab, Figma, Canva, Adobe Photoshop, Microsoft Office, G Suite, Cloud Firestore, Qualtrics, Visual Studio Code, Xcode

Work Experience:

Project Co-Lead | Present

MIT CSAIL

- Co-leading research to apply large language models (LLMs) for detecting financial fraud
- Conducting literature review and identifying relevant datasets to define a focused research question

Data Analyst | 2024

Silver Lining Mentoring | Intern

- Collected and organized data on different organizations across the United States that support youth in foster care using Microsoft Excel and Google Sheets
- Analyzed data using Python, Pandas, Microsoft Excel, and Google Sheets to understand different foster care statistics for different U.S. states
- Created data visualizations using Python, Pandas, Microsoft Excel, and Google Sheets

App Developer (Undergraduate Researcher) | 2024

MIT Media Lab | [MemPal](#)

- Lead frontend app developer for the MemPal application
- Create designs in Figma and implement them using React Native, JavaScript, HTML/CSS, and Expo Go
- Establish a connections between the frontend and database

Full Stack Developer (Undergraduate Researcher) | 2023

MIT Early Childhood Cognition Lab

- Provided assistance for a study focused on better understanding the effects of social discussion on learning
- Created a chat app using Javascript, HTML, and Tailwind CSS to be used in the pilot study
- Embedded the chat app in the study using jsPsych
- Established a database using SQL so that participant data could be analyzed

Full Stack Developer | 2023

Publicis Sapient

- Implemented a fully functioning website that hosts optimization models for the oil and gas industry
- Created various website pages using Angular Typescript, HTML, CSS
- Developed two linear programming models on the backend using Python, Pandas, PuLP, GLPK
- Built a database using MySQL to host outputs from the optimization models and connected it to Amazon RDS
- Worked closely on UI/UX with Project Managers and collaborated on Figma

Lead Website Designer | 2023

[MissionSAFE](#)

- Built an entire new website for MissionSAFE using Squarespace
- Created a color palette and font theme that better represented MissionSAFE's goals and brand

- Designed the website to be more accessible to the target demographic of MissionSAFE

Web Develop + Logistics | 2022 - 2023

xFair

- Modified the frontend of the xFair website using HTML/CSS
- Reached out to more than 50 potential sponsors for the xFair Career Fair
- Coordinated the logistics and day-of operations of the 2023 Spring xFair Career Fair

App Developer | 2022

Aavia

- Developed an interactive community poll, health log toggles, detail pages for users to log health information using Xcode, SwiftUI, Cloud Firestore, and GitHub
- Collaborated with App Development team to debug and conduct code reviews
- Provided feedback on UI elements, user engagement, and strategies to reach a larger user base
- Assisted with copywriting targeted towards younger populations

Intern | 2022

Boston Medical Center Autism Program

- Provided assistance with the finalization of a 26-page [Safety Resource Guide](#) for individuals with autism and their families
- Created several resource guides about medical identification bands, as well as acquiring a support animal
- Prioritized user experience when creating resources by making them easy to read and understand
- Edited and created various questionnaires to be used in the Behavior Clinic to assess patients and track behaviors
- Attended several lectures and trainings offered through the Boston Medical Center

Research Experience:

Undergraduate Researcher | 2021 - 2022

MIT Institute for Medical Engineering & Science (IMES) and MIT McGovern Institute

- Co-authored and submitted an IRB proposal to launch a pilot study comparing passive wearable data and questionnaire data
- Coded a Mental Health Chatbot using Python and prompt engineering with a heavy focus on user experience
- Presented the Chatbot and additional learnings about OpenAI API and GPT-3 to research group

Telehealth Equity Research Intern | 2021

Massachusetts Health Quality Partners

- Worked alongside my supervisors to conduct research on the utilization, challenges, and potential of virtual healthcare and telehealth
- Further strengthened my literature review skills and completed writing a [paper](#) compiling research conducted

Assistant Lab Technician Intern | 2019

University of California, Los Angeles Physiology Outreach Program

- Participated as an intern in the laboratory of Dr. Yibin Wang, Professor of Molecular Medicine in the David Geffen School of Medicine.
- Assisted lab technicians and researchers by conducting research about the functional impact of branched-chain amino acid metabolism in the body using Cre-Lox recombination

Project Lead | 2019

Biostatistics and Medical Imaging Project

- Worked alongside Mrs. Kim, Associate Professor of Radiology at UCLA, to present her research at the Statistical Methods in Imaging 2019 Conference at the University of California, Irvine
- Tasked to research and present information on medical imaging techniques and diseases such as Response assessment in neuro-oncology criteria (RANO) and gliomas, Lugano Criteria and lymphomas

Teaching Experience:

Private Tutor | 2019 - Present

- Work with elementary, middle, and high school students
- Create lesson plans, help review and preview academic material
- Provide guidance with homework and projects
- Prepare students for the PSET 8/9

Teaching Assistant | 2016 - 2019

New Life Korean School

- Worked to assist teachers for the Level 4, Level 1, and Preparatory Level classes
- Served as a substitute teacher when teachers were absent
- Made sure that students understood the lesson, and worked one-on-one with those who were falling behind
- Supervised students during break time and after school

Additional Experience:

Grader | Present

MIT 6.3950 AI, Decision Making, and Society

- Dedicate 5-10 hours weekly to grade problem sets
- Attend meetings to discuss grading guidelines for problems sets

Co-President | 2020 - 2024

American Red Cross Team and Network of MIT (ARCTAN)

- Ensured that all committees of the club understand their responsibilities and provide support with various events
- Hosted multiple blood drives every semester
- Successfully held a one-week fundraiser partnered with MIT Alpha Phi to raise money
- Organized a first-aid kit drive to make kits and donate them to local underprivileged communities
- Other roles included: Community Outreach Coordinator, Secretary, Senior Advisor

Residential Director | 2021 - 2024

MIT Medlinks

- Provided assistance to my residence hall and the greater MIT community by supplying over-the-counter and first-aid supplies
- Organized meetings with other Medlinks in my living community to hold events for students throughout the school year

Co-Owner + Artist | 2019 - Present

Ujusunset

- Started a small business with friends focused on stationery items
- Designed logo, color palettes, and various products
- Managed social media

Digital Artist | 2021 - 2022

Insect Dances Project

- Worked as a digital artist for a project focused on creating animated shorts to accompany music composed by Dr. Elena Ruehr
- Created various color palettes and background images to be used in the animated shorts
- Assisted the development of characters and a storyboard for the animated shorts

Graphic Designer | 2020 - 2021

Health and Policy Analysis Team (HPAT)

- Intercollegiate ethnographic journalism, research, and advocacy initiative
- Created graphics for all subcommittees such as Publications, Web Development, and Social Media
- Provided assistance with various projects including the COVID-19 Ethnography Project

Editor-In-Chief | 2018 - 2020

International Baccalaureate Newsletter

- Created a newsletter for my high school IB program
- Released monthly newsletters for all members of the program to engage with
- Answered team's questions, set guidelines and deadlines for articles, and worked with team to ensure the release of issues
- Successfully established a strong leadership among other students so that the newsletter could be continued even after I graduated
- Other roles: Writer, Page Designer

Community Outreach:

Co-Founder | 2018 - 2020

SNRise

- Community service project focused on working with students to help strengthen communication and advocacy skills
- Held multiple workshops at the Encino-Tarzana Branch Library and Our Community School on self-expression and public-speaking

Core Team Member | 2019 - 2020

Empowered Period

- Focused on raising awareness and breaking down stigma surrounding women's health and hygiene
- Participated in and raised over \$300 selling handmade hygiene pouches and scrunchies at local farmers market

Co-Founder + Project Lead | 2018 - 2020

LeadHERS | Girls Build Team

- Competed in the Girls Build competition held by the Los Angeles Promise Fund and won a \$1000 grant
- Mission is to engage young women in politics, the government, and communities through workshops
- Worked to coordinate team meetings and plan/run workshops and other events
- Successfully organized workshops to engage with girls in our local community and help them learn more about leadership skills

Volunteer | 2018 - 2019

Valley Presbyterian Hospital

- Completed a total of over 120 hours of volunteering at my community hospital
- Provided assistance at various areas of the hospital including: Maternity, Acute Rehabilitation, Pediatric Intensive Care Unit, Neonatal Intensive Care Unit, Pediatrics, and Admitting
- Learned about the inner workings of a hospital, and establish good relationships with physicians, nurses, patients, and other volunteers

Treasurer and Performer | 2017 - 2020

Symphonia | Somerford Place of Northridge, Brookdale Senior Living

- Held musical performances for seniors every Saturday
- Performed songs on the piano, sung, and held duets with other students
- Organized themed events during holidays, including handing out small gifts and holiday songs
- As treasurer, kept track of all members' expenses when they purchased materials for gifts

Conferences:

Statistical Methods in Imaging Conference | 2019

University of California, Irvine

Literature &... Conference | 2019

Archer School for Girls

Awards:

Gudger Crittenden Scholarship Recipient | 2020

Pacific City Bank Scholarship Recipient | 2020

Congressional Gold Medal and Gold Certificate Recipient | 2019

Presidential Volunteer Award Gold Certificate Recipient | 2016, 2017, 2018

Questbridge College Prep Scholar | 2019

Girls Build Foundation \$1000 Grant Recipient | 2018

Academic Decathlon Championships | 2017, 2018

Perry Initiative Participant Certification | 2018

Languages:

- **English:** native speaker
- **Korean:** native speaker
- **Spanish:** intermediate