

MADELINE WONG

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Electrical Engineering & Computer
Science, Music

Fourth-year student at MIT majoring in EECS
and in music. Passionate not only about
software engineering and computer science,
but also about innovative applications of
technology to music and art. Interested
primarily in backend development, with
some experience in frontend.

Skills: Python, Java, Go, R,
C++/Arduino, JavaScript,
HTML/CSS

EDUCATION

Massachusetts Institute of Technology
Sept 2017 – June 2022 (B.S., M.Eng.)

- Cum. GPA: 5.0 / 5.0
- Relevant EECS Coursework:
 - Algorithms, Des. & Anal.
 - Circuits & Electronics
 - Computer Systems Security
 - Differential Equations
 - Elements of Software Constr.
 - Interactive Music Systems
 - Linear Algebra
 - Machine Learning, Intro.
 - Probability, Intro.
 - Signals & Systems, Intro.
- Relevant Music Coursework:
 - 20th Century Composition
 - Advanced Seminar in Music
 - Harmony & Counterpoint I, II
 - Music since 1900
 - Music Technology, Intro.
 - Popular Musics of the World

MAILING ADDRESSES

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WORK EXPERIENCE

- Accenture, Security Consulting Analyst *June 2020 – Aug 2020*
- Designed and wrote cybersecurity tabletop exercises and related playbook as part of client's cyber hardening program.
 - Built a web application that uses ML to match Accenture employees with potential projects as part of the technology summer analyst hackathon (Python).
- Google, Software Engineering Intern *May 2019 – Aug 2019*
- Created an action log (Go) for security detection software to track its state and rebuild timelines. Built dashboards to visualize the data (GoogleSQL).
- MIT L.I.D.S., Undergraduate Researcher *Jan 2019 – May 2019*
- With the MIT Laboratory for Information and Decision Systems (L.I.D.S.), built a Chrome extension to categorize, filter, and/or block users' ads; provide accurate and discretized user value information to advertisers through 3D tensor completion (Python); and pay users for sharing their preferences and personal data.
- Nokia Bell Labs E.A.T., Intern *June 2018 – Aug 2018*
- Collaborated with one other intern in the Experiments in Art and Technology (E.A.T.) lab to augment the musical performances of Artist in Residence Lainie Fefferman by broadcasting audio streams to audience members' cellphones.
 - Launched a mobile website (HTML/CSS/JavaScript) to stream live audio, which was encoded and broadcasted from Raspberry Pi servers.
 - Presented project and demo to the president of Bell Labs, won one of five prizes awarded for best presentation out of approximately 100 interns.

PROJECTS

- Analyzing the Impact of COVID-19 in the US, Python/R *May 2020*
- Leveraged ML regression and data science to analyze the relationship between COVID-19 confirmed cases and various factors at the state level, including political party affiliation, presidential/gubernatorial approval ratings, and economic metrics.
- Music the Gathering, Python *May 2020*
- Designed and implemented an online musical "cards" game, capable of multiplayer interaction, score-tracking, and synchronous track playback (Python, Kivy framework).
- Fully-Integrated Sensory Habitat, Python/Arduino *May 2018*
- Engineered an automated fish tank monitor and feeder (C++ via Arduino IDE), wrote server-side code (Python) to store measurements and update a webpage with real-time graphs and statistics of the monitor measurements.
 - Fish tank monitor included sensors for temperature, pH, turbidity, and water level that sent measurements to the server, as well as a motorized feeder system.

ACTIVITIES

- MIT Asian Christian Fellowship (ACF), Committee Chair *2017 – present*
- Worship team member: meet biweekly to prepare music and lead fellowship worship at Friday night "Large Group" events (4 hrs/wk)
 - Large Group committee member (2018 – 2020): meet weekly (2 hrs/wk) to plan lessons and schedules for weekly fellowship "Large Group" events
- MIT Chorallaries A Cappella Group, President *2017 – present*
- President (2019 – present): hold weekly exec meetings, manage concert logistics and planning, coordinate COVID-era decisions including adapting senior traditions, communicating with other a cappella groups, and planning remote procedures
 - Music Director (2018 – 2019): supervised CD recording and mixing/mastering process; evaluated 900+ songs for repertoire selection each semester; arranged songs and supervised other members' arranging processes; planned and ran rehearsals twice a week (5 hrs/wk) and sectionals once a week (3 hrs/wk)
 - Assistant Music Director (2017 – 2018)
- MIT Good Karma, Founding Member & Secretary *2018 – present*
- Plan events and "hacks" to incentivize kindness and self-care in the MIT community
- MIT Society of Women Engineers (SWE), Member *2017 – present*
- MIT Undergrad. Practice Opportunities Prog. (UPOP) *2018 – 2019*
- Participated in yearlong professional development program for MIT sophomores