

# Mindren Lu

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## EDUCATION

**MASSACHUSETTS  
INSTITUTE OF  
TECHNOLOGY (MIT)**  
BS IN COMPUTER SCIENCE  
AND BIOENGINEERING,  
MINOR IN LINGUISTICS  
AND MATHEMATICS  
Expected Jun 2022  
Cambridge, MA  
GPA: 5.0/5.0

**NORTHSIDE COLLEGE  
PREP HS (NCP)**  
Grad. Jun 2018  
Chicago, IL  
GPA 4.0, SAT 1590, ACT 36

## COURSEWORK

### CURRENT

Biological Circuit Engineering  
Biological Fields, Forces, Flows  
Cell Biology

### PAST

Computer Systems Engineering  
Design/Analysis of Algorithms  
Intro to Machine Learning  
Natural Language Processing  
Quantum Computation  
Software Construction

Computational Biology  
General Biochemistry  
Genome Stability & Engineering  
Organic Chemistry

## SKILLS

### LANGUAGES

Mandarin: fluent  
Latin: proficient  
Spanish: basic

### PROGRAMMING

Python, Java, Scala,  
Arduino, Spark, Go, SQL,  
Assembly, Bluespec,  
HTML, CSS, JS

Github: [mdlu](#)  
LinkedIn: [mindren-lu](#)

## EXPERIENCE

### DOC.AI | TECHNICAL PROJECT MANAGER INTERN

Jan - Feb 2021 | Palo Alto, CA (Virtual)

- Guided a team of 8 MIT interns in 3 subteams towards implementation of a digital IRB tool, capable of clinical protocol parsing, validation, and creation using GPT-3

### AMAZON.COM | SOFTWARE DEVELOPMENT ENGINEER INTERN

May - Aug 2020 | Berkeley, CA (Virtual)

- Designed and implemented functions in Spark/Scala for an internal large-scale econometric modeling toolkit used by Amazon economists; capable of calculations at scales significantly beyond any existing tools in R or Stata (billions+ of rows of data)
- Maintained high code quality through thorough design meetings and documentation

### KELLIS LAB | COMPUTATIONAL BIOLOGY RESEARCHER

Jun - Aug 2020 | Cambridge, MA (Virtual)

- Conducted mini-projects involving drug targeting with Mendelian immune diseases, genetic information extraction using NLP, and tissue-specific enhancer networks

### MIT CSAIL | UNDERGRADUATE RESEARCHER

Feb - Aug 2020 | Cambridge, MA

- Built a framework for developing AI-mediated video conferences; mainly concerned with applications which manipulate participants' sense of time

### MICROSOFT CORPORATION | SOFTWARE DESIGN ENGINEER

Jan - Feb 2020 | Cambridge, MA

- Collaborated with the Met/Rijksmuseum to build an art explorer, which finds matching artworks transcending cultures and media; app demoed at NeurIPS 2020
- Responsible for processing metadata, returning matches via KNN using a modified ball tree for conditional searches, and utilizing SHAP to visualize the model's rationale
- Paper: <https://arxiv.org/abs/2007.07177>

### MIDDLE EAST ENTREPRENEURS OF TOMORROW (MEET) | INSTRUCTOR

Jul - Aug 2019 | Jerusalem, Israel

- Taught front-end and back-end web development to a group of 90 Israeli and Palestinian high school sophomores in a highly selective one-month program

### ARGONNE NATIONAL LABORATORY | RESEARCH AIDE

Jan - Feb 2019 | Lemont, IL

- Implemented neural networks in Python and Tensorflow to predict iron coordination numbers and charges of oxygen atoms in  $\text{Li}_3\text{FeO}_{3.5}$  using XANES spectra
- Paper: <https://arxiv.org/abs/1905.03928>

## LEADERSHIP

### DDR @ MIT | Co-FOUNDER, TREASURER

Jan 2019 - Present | Cambridge, MA

- Co-founded a group to promote Dance Dance Revolution and related dance rhythm games; maintaining a public arcade cabinet and overseeing club purchases

### MIT MEN'S ULTIMATE FRISBEE TEAM | B TEAM CAPTAIN

Sep 2018 - Present | Cambridge, MA

- Responsible for leading practices and workouts, and managing tournament logistics