ADELINE SHIN

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EDUCATION

Columbia Mailman School of Public Health, New York, NY **2019–2021**
M.S. Candidate in Biostatistics, Theory and Methods
GPA: 3.34/4.00

Carnegie Mellon University (CMU), Pittsburgh, PA **2015–2019**
B.S. in Chemical Engineering with University Honors
Additional Major in Biomedical Engineering, Minor in Drama
GPA: 3.52/4.00

EMPLOYMENT

New York City Department of Health and Mental Hygiene **June–Aug 2018**
HRTP Intern, Division of Informatics IT

- Cleaned National Provider Index (NPI) data warehouse of 50 million rows for widespread, transparent use within agency
- Condensed NPI data warehouse to relevant data using exploratory data analysis skills
- Independently learned SQL, programmed stored procedure to update database weekly

Eli Lilly and Company, San Diego, CA
Academic Intern, Protein Purification **June–Aug 2017**

- Investigated new purification scheme nominated as one of Eli Lilly's Top 100 Innovations

Academic Intern, Protein Crystallization **May–Aug 2016**

- Applied high–throughput crystallization of proteins to multiple projects, leading to discovery of 2 unique protein structures

University of Pittsburgh Medical Center **Sept 2015–March 2016**

- Aided patients in Emergency Department, offering supplies that might benefit their stay

PROJECTS

COVID–19 Modeling and Visualization

- Used coordinate–wise optimization to create exponential model for COVID–19 case trends among countries
- Stratified countries by groups and clusters to creatively visualize models and data

Exploring Taxi Habits of New Yorkers on Valentine's Day

- Analyzed data from NYC Taxi and Limousine Commission to determine where New Yorkers were going for Valentine's Day; built website to present findings
- Created fare estimation model, visualized data using Leaflet maps, plotly graphs, and heatmaps

Medtronic Scoliosis Simulator

- Partnered with Medtronic to design scoliotic model with mechanical and anatomical accuracy
- Model is to be further developed by R&D engineers to test surgical instruments, improving surgical outcomes

ChocLine Printer:

- Optimized flow parameters to improve 3D–printing of chocolate, designed 3D–printer for chocolate based on thermodynamic and rheological properties

LEADERSHIP

Society of Women Engineers (SWE) Mentoring Chair**:** Connected over 90 mentors and mentees as CMU SWE's Mentoring Chair, increasing program by 50%, organized and hosted events for personal and professional development
PhiDelt Buggy: Head Driver for annual buggy race at CMU, mentored new driver and assisted with mechanics

SKILLS AND EXPERTISE

Technical: R, LaTeX, GitHub, SQL, MATLAB, Python, ASPEN, Website Creation, Microsoft Office Suite, CAD, 3D–Printing, Laser Cutting, Consumer Product Design, Prototyping
Languages: English, Conversational Mandarin