

Hannah Yuhan Ma

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[Github](#) • [Linkedin](#)

EDUCATION

Northwestern University | Evanston, IL

Anticipated June 2025

- BA in **Biological Sciences and Data Science**
- Cumulative GPA: **3.99/4.00** | Dean's List: **8 of 8 quarters**
- Relevant Coursework: Data Visualization, Data Exploration, Database Management, Statistical Theory and Methods, Machine Learning and Data Modelling

PROJECTS

Music Video Success Prediction | *Northwestern University; Data Modeling*

Feb. 2024

- Developed diverse set of models for regression prediction on number of likes received by music videos based on song characteristics, using Kaggle data on >19,500 songs
- Leveraged in-depth exploratory data analysis for feature engineering and hyperparameter tuning to optimize 5 models: null, elastic net, random forest, k-nearest neighbors, and feed-forward neural network
- Presented findings with storytelling and visualizations in final report and executive summary

AiSL - Live ASL Translator | *Northwestern University; IEEE Technical Program*

Mar. - May 2024

- Implemented Long Short-Term Memory neural network trained on publicly available ASL video data to build real-time ASL translator

PROFESSIONAL EXPERIENCE

Northwestern Academic Support and Learning Advancement (ASLA) | Evanston, IL

Sept. 2022 - Present

Physics Drop-In Senior Tutor

- Mentor 4-7 undergraduate students in physics courses on weekly basis, improving student performance on exams by up to 3 letter grades
- Lead biweekly prep meetings for all physics tutors, guiding content review to enhance performance
- Act as liaison between physics professors, ASLA staff, and tutors to communicate student needs and ideas for program improvement

Xiao Lab, Oregon Health and Science University | Portland, OR

June 2023 - August 2023

Summer Undergraduate Intern

- Conducted literature review of Clear Cell Sarcoma pathogenesis to understand pharmaceutical targets and recent developments in proteolysis-targeting chimera (PROTAC) research
- Replicated synthetic route for enzyme-binding domain of a relevant PROTAC with 50-70% yield, using MS and NMR spectroscopy for verification
- Created visually compelling poster presentation for all-intern symposium, communicating research findings to a diverse audience of professionals, graduate students, and peers

Rocklin Lab, Feinberg School of Medicine | Chicago, IL

Jan. 2023 - June 2023

Undergraduate Researcher

- Developed research proposal with help of graduate student to explore protein folding using deep learning (RFdiffusion) software and obtained competitive funding from Office of Undergraduate Research
- Independently investigated potential cell-penetrating properties of novel designed zinc-finger proteins using Bash on Quest, Northwestern's High-Performance Computing Cluster
- Generated 200+ designed proteins to visualize amino acid bias in generated protein sequences

LEADERSHIP

TEDxNorthwesternU

Sept. 2021 - Present

Logistics Team Co-Chair

- Coordinate with venues to arrange annual conference for 200+ attendees and reception for 7 speakers
- Oversee team of 6 members to manage ticketing, speaker gifts, team merchandise, and audio/visual team

SKILLS

Programming languages: R, Python, Bash, SQL

Technologies and Tools: tidyverse, tidymodels, shiny, tigris, pandas, scikit-learn, PyTorch, Github

Other: ChemDraw, ImageJ, LoggerPRO, MestreNova, RFdiffusion