Cara Chang

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EDUCATION

Northwestern University GPA: 3.748

Bachelor of Arts in Data Science, Economics, International Studies — *Sep. 2021 – June 2025*

Relevant Coursework: Machine Learning, Deep Learning, Data Visualization, Database Management, Econometrics

EXPERIENCE

Teaching Assistant — Mar. 2024 – Present

Northwestern Department of Statistics and Data Science — *Evanston, IL*

- Tailored instructional support for 75+ students in SQL and Python to help students apply machine learning, joins, and query logic to real-world datasets
- Standardized grading workflows in Excel, aligning 10+ TAs
- Presented 3 supplementary instructional content lectures to bridge identified curricular gaps

Computational Biology Research Assistant — June 2024 – Aug. 2024

Mayo Clinic, funded by Northwestern Summer Internship Grant Program — *Rochester, MN*

- Designed and deployed an end-to-end ML pipeline for treatment prediction (ROC-AUC = 0.75), improving baseline model accuracy and clinical deployment readiness
- Conducted feature selection on 5,000+ variables to identify 100 candidate biomarkers with penalized linear models
- Collaborated with clinical research teams to validate anomaly detection findings using PCA visualizations
- Automated runtime via HPC deployment, reducing processing time by 10% and enabling broader scalability

Deep Learning Research Assistant — June 2023 – Aug. 2023

Shirley Ryan AbilityLab, funded by Northwestern Summer Internship Grant Program — *Chicago, IL*

- Trained Convolutional Neural Networks on 4D tensors using Keras on Google Cloud Platform to predict muscle function with $R^2 = 0.9$, using transfer learning to reduce training data volume by 50%
- Audited noisy training environments across 30+ levels of variability to simulate real-world deployment risks
- Conducted data integrity QA during MATLAB to Python migration, ensuring reliability for downstream ML tasks

Economics Research Assistant — June 2022 – Aug. 2022

Kellogg School of Management, funded by Northwestern Summer Internship Grant Program — *Evanston, IL*

- Developed Python script to improve record matching accuracy (+5,000) across 21,000 economic data points
- Built visualizations in Seaborn that revealed national wealth trends, enabling hypothesis refinement

LEADERSHIP

Student Orientation Leader — Mar. – Sep. 2022, 2024

Northwestern University — *Evanston, IL*

- Coordinated communications and individual meetings for 30 incoming students to prepare students before move-in
- Led 10+ sessions on transitioning to college to advise students in comprehensive, approachable manner

Consultants Advising Student Enterprises — *Evanston, IL*

Recruitment Chair — Mar. 2023 – June 2024

- Designed data-driven selection process to reduce reviewer bias in 200+ applications
- Launched mentorship initiative for 80+ members, increasing retention and engagement metrics

Project Manager, Data Analyst — Dec. 2021 – Mar. 2023

- Delegated workstreams to team of 5 based on client feedback to establish team expectations
- Led 5-person team to deliver market expansion strategy using Excel dashboard on 8,000+ restaurant locations
- Created week-by-week headcount forecast model aligned to client resource constraints

SKILLS AND INTERESTS

Technical Acumen: Python, SQL, R, Tableau, Google Cloud, Slurm, Excel, Git
Libraries: pandas, NumPy, Matplotlib, Tensorflow, scikit-learn
Languages: Spanish (professional proficiency)
Interests: Volleyball, Classical piano, learning new languages (Korean, Polish)