# YILIN CHEN

909-560-7658 | chenyilin0509@gmail.com | Ann Arbor, MI | U.S. Permanent Resident

## EDUCATION

**University of Michigan** **Ann Arbor, MI**
Bachelor of Science, *Honors Mathematics, Computer Science* Sep 2022 – May 2026

- GPA: 3.3/4.0
- Coursework: Advanced Calculus, Advanced Linear Algebra, Analysis on Manifolds, Combinatorics, Mathematical Logic, Complex Analysis, Nonlinear Programming

## WORK EXPERIENCE

**College of Science and Engineering, Texas State University** **San Marcos, TX**
Edge Computing Research Intern May 2024 – Present

- Conducting an in-depth study to identify dominant performance traits of input-sensitive graphs on a parallel processing GPU system. Conducting experiments on various GPUs to generate fine-grain performance data (working with Koblenz open-source dataset)
- Building Random Forest and Neural Network models to produce 96% peak performance on Nvidia CUDA (measured in GTEPS). Running BFS and SSSP algorithms on an autotuned model with a parameterized version of warp shuffling to optimize performance on CUDA
- Employing machine learning data imputation techniques for data cleaning, and creating advanced data visualizations, including PCA charts, to communicate experimental results

## PROJECTS

**Interactive Machine Learning Visualizations**

- Developed a natural language processing application to automatically classify the subject of posts from the course Piazza page
- Implemented recursive algorithms and utilized advanced data structures including binary trees and maps to optimize text analysis and classification accuracy with concepts from container ADTs, dynamic memory management, and iterators to manage and process large datasets efficiently, reinforcing previous coursework in software development practices.

## RESEARCH

**Ross School of Business, University of Michigan** **Ann Arbor, MI**
Education Operations Research Assistant Jan 2024 – Apr 2024

- Utilized statistical techniques to perform data and empirical analysis on large datasets
- Designed data analytic projects for MBA students

**Department of Mathematics, University of Michigan** **Ann Arbor, MI**
Math Researcher Jan 2023 – Apr 2023

- Researched knot theory with a focus on knot classes, projections, Reidemeister moves, and n-coloration; investigated colorability of prime and their composite knots
- Conducted analysis of progressionless sequences and conjectured on their periodic behaviors and structures; developed algorithms to generate its variations
- Studied the billiard problem with transformations and its relations with physics laws

## TECHNICAL SKILLS

**Programming Languages:** C++, Java, Python, MATLAB, MySQL, R
**Tools:** Adobe Photoshop, Adobe Premiere, Adobe After Effects, Adobe Lightroom, Blender
**Certifications:** Certified SOLIDWORKS Associate in Mechanical Design, JPMorgan Chase & Co. Quantitative Research Virtual Experience Program
**Languages:** English (Native), Mandarin Chinese (Native), Cantonese (Working Proficiency)