Grace Liu

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EDUCATION

University of Michigan, Ann Arbor   **Expected May 2027**
B.S.E. in Computer Science, Minor in Statistics   GPA: 3.95/4.0
- **Relevant Coursework:** Data Structures and Algorithms, Machine Learning, Web Systems, Computer Organization, Linear Algebra
- **Awards:** University of Michigan Regents Merit Scholarship, University of Michigan Dean's Honor List, University Honors, Engineering Society of Detroit's Outstanding High School Students of the Year Scholarship.

WORK EXPERIENCE

United Wholesale Mortgage   **May 2025 – Aug 2025**
Software Development Intern   Pontiac, MI
- Developed C# API endpoint to integrate with internal document management system to enable bulk document downloads by document IDs; implemented unit and integration tests using xUnit and Moq to validate functionality and ensure reliability.
- Collaborated in an Agile team to design a database and build a full-stack web application using React, C#, and SQL that implements API logic to query SQL Server for failed document extractions and trigger retry services based on user input.

Dare Auto   **Aug 2024 – Sep 2024**
Data Intern   Plymouth, MI
- Reflashed 4500 Electro Hydraulic Power Steering system pumps to update internal software.
- Compiled and organized each pump's ECU Serial Number into one excel file using Powershell commands and built-in Excel tools.

PROJECTS & RESEARCH

The Michigan Daily Web Developer   **Jan 2025 – Present**
- Developed an interactive, responsive React-based website with CSS animations inspired by Spotify Wrapped to highlight the end-of-school-year edition.
- Improved the crossword puzzle editor for the games section by adding functionality to create and publish 21x21 crosswords using Svelte.

Michigan Data Science Team   **Sep 2024 – Present**
- Developed multi-class image classification model to identify the make of a car from an input image using PyTorch and a ResNet-50 pre-trained model with 75% accuracy.
- Explore the basics of convolutional neural networks, transfer learning, data augmentation, and PyTorch workflow model.

Natural Language Processing Project   **Apr 2024**
- Utilized supervised machine learning model and OOP in C++ to develop and train a Naive Bayes classifier to classify forum posts according to different labels with 87% accuracy.
- Write, design, and implement testing suite to ensure the project passes different input conditions and edge cases.

CAMPUS LEADERSHIP

Instructional Aide - ENGR 101: Introduction to Programming   **Jan 2025 – Present**
- Assist 30+ students in learning how to use MATLAB for data analysis, image manipulation, and plotting as well as C++ for implementing algorithms like binary search and Traveling Salesperson heuristics during 2-hour weekly lab sessions.
- Host office hours to help debug student projects, reinforce course concepts from lecture, and answer questions from homework.

Society of Women Engineers Spring Break Outreach Program   **Feb 2024 – Apr 2024**
- Enthusiastically taught high schoolers in the Chicago area about UX/graphic design and how to use Figma to design custom profile cards..
- Explore the basics of convolutional neural networks, transfer learning, data augmentation, and PyTorch workflow model.

SKILLS

- **Languages and Libraries**: C/C++, Python, C#, MATLAB, JavaScript, TypeScript, SQL, Pandas, NumPy.
- **Frameworks and Platforms**: React, Django, PyTorch, SQL Server, Svelte.
- **Other Tools**: Git, Figma, Microsoft Office (Word, Excel, PowerPoint, Outlook).