

CHRISTIAN MANOHAR

✉ chmano@umich.edu [in @christianmanohar](https://www.linkedin.com/in/@christianmanohar) [+1 \(734\) 747-4605](tel:+17347474605)

Education

University of Michigan

Ann Arbor, Michigan

Bachelors of Science in Data Science, 3.433 GPA

2022-2026

- **Selected Coursework:** Machine Learning, Database Management Systems, Statistical Computing, Applied Linear Regression, Data Structures and Algorithms, Linear Algebra, Multivariable and Vector Calculus, Discrete Math, Probability and Statistics

University of Michigan

Ann Arbor, Michigan

Bachelors of Music in Jazz and Contemporary Improvisation, 3.433 GPA

2023-2026

Technical Skills

Languages: C/C++, Python, SQL, R, Java

Technologies: numpy, conda, pandas, PyTorch, matplotlib, librosa, Shiny, RStudio, Valgrind, Oracle, Git, Scikit-learn, Eigen

Projects

Dog Image Classification - Python

September 2024

- Utilized the PyTorch library to create various image classifiers for separate dog breeds
- Planned and built the architecture for a **Convolutional Neural Network** that achieved up to 95% accuracy on a test set
- Built a **Vision Transformer (ViT)** based on architecture created by Dosovitskiy et Al. in 2021

Facebook Database Replication - SQL

September 2024

- Utilized **SQL** through **Oracle** to design a database to represent users and interactions in a Facebook-Like social media service
- Created many queries to load data from a poorly designed database into my newly-designed better database, utilizing various joins and conditions to structure the logical schema optimally
- Developed external schema to display the database in a digestible way

Electric Vehicle Analysis Shiny App - R/Shiny

April 2024

- Collaborated with a team to analyze a dataset revolving around electric vehicle use over time, and utilized R to create a wide variety of charts to illustrate the data
- Personally developed an interactive **shiny** app with R to display our findings in a more digestible way
- Utilized **Time Series Forecasting** to make predictions about the future of electric vehicles and their impact on global oil usage

Bank Customer and Transaction Database - C++

October 2023

- Created a database to represent a bank, its customers, and transactions
- Utilized Hash Tables, Functors, and Comparators for efficient data access, retrieval, and alteration
- Developed a query interface for information retrieval, including bank revenue collected during a given time period, transaction history of a given customer, transactions completed during a given time period, and a summary of all bank activity on a given day

Work Experience

Best Buy

Ann Arbor, Michigan

Product Flow Specialist

October 2021 - September 2023, July 2024 - Present

- * Performed asset protection and documented incidents of theft or other disruptions in the company-wide database
- * Developed relationships with customers and understood all facets of their problems in order to find solutions that fit each customer personally

Blue Bop Jazz Orchestra

Ann Arbor, Michigan

Music Director

April 2024 - Present

- * Lead rehearsals and prepare music for BBJO, University of Michigan's premier student-led jazz orchestra
- * Responsible for connecting with groups across campus and off campus for collaborations and performances

Interests

Musical Arranging/Composition, Exercise and Fitness, Sports Data Analysis, French Language, Soccer