

# DAVID CHEN

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## EDUCATION

### EMORY UNIVERSITY

Bachelor of Science

Major in Computer Science and Mathematics; Minor in Quantitative Science

Cumulative GPA: 4.0/4.0; Dean's List

Relevant Coursework: Database Systems; Python Statistical Programming; Machine Learning; Intro to Artificial Intelligence

Certificates: [Algorithm Expert](#); [Frontend Expert](#); [LeetCode 2023 Annual Badge](#) (Top 0.4% LeetCode);

Atlanta, GA

Expected May 2026

## EXPERIENCE

### EMORY GOIZUETA BUSINESS SCHOOL

Jan 2024 - Present

AI Research Assistant

- Developed Next.js frontend platform to display and manage videos from YouTube Data API and collect user interaction data
- Engineered a robust SpringBoot backend system to process frontend requests and database querying, deployed on AWS EC2
- Architected MySQL database schema for storing complex relations for videos, watch lists, commercials, and user interactions
- Designed an algorithm to quantify video content similarity, leveraging AWS for object detection, ChatGPT4 for transcript keyword generation, and SpaCy for semantic similarity analysis

### CURASTONE

Sep 2023 - Dec 2023

Frontend Developer Intern

- Developed an AI-learning assistant that generates flashcards and personalized exercises using TypeScript and Next.js
- Implemented user authentication, file upload, and course management, integrated with backend API using Redux Toolkit
- Designed responsive webpages using Tailwind CSS to ensure proper display of elements on various screen sizes
- Deployed website using Vercel and AWS Route 53 and documented the deployment process for future reference

### EMORY DATA SCIENCE CLUB ([GitHub](#))

Oct 2022 - May 2023

Project Lead

- Directed a project focused on analyzing the relationships between mental health metrics, COVID-19, and economic indicators
- Orchestrated the cleaning and integration of raw datasets, building a multi-dimensional time-series data frame for analysis
- Successfully built high-performing XGBoost models that predict mental health metrics with low error rates

## TECHNICAL PROJECTS

### E-commerce Website ([GitHub](#) | [Website](#))

*JavaScript, React, Google Cloud Firebase*

- Developed a full-stack online shopping site featuring product display, item search, shopping cart, and checkout functionalities
- Implemented props sharing and global state management with React Context API
- Integrated frontend server with Firebase, enabling user authentication and secure storage of user data

### Neural Network For Mpox Diagnosis ([GitHub](#) | [Website](#))

*Python, Django, Sklearn, Tensorflow*

- Trained a neural network utilizing data from 25,000 patients exhibiting symptoms of MPox to develop a recommendation system for predicting whether an MPox test is necessary
- Conducted data preprocessing by replacing missing data, standardizing binary values, and implementing OneHotEncoding
- Implemented and tuned a neural network architecture with 4 layers, achieving a notable accuracy of 68% in diagnosing MPox

### Online Task Manager ([GitHub](#) | [Website](#))

*Python, Django, SQLite*

- Engineered an efficient online to-do-list system for recording and tracking and assigning priorities to tasks
- Designed APIs based on CRUD operations to support task addition, deletion, and editing
- Leveraged the Django authentication system to store user information and encrypt passwords with SHA256 hash

## SKILLS

### Frontend Development

- JavaScript - TypeScript  
- HTML/CSS - Tailwind  
- React.js - Next.js

### Backend & Database Development

- Java - C/C++ - MySQL  
- PostgreSQL - AWS - GCP  
- SpringBoot - Django - MyBatis

### Data Science & Machine Learning

- Python - R - SQL  
- Matplotlib - Pandas - Scikit-learn  
- Tensorflow - XGBoost - Keras