

BRYCE MAYDAY

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EDUCATION

Michigan State University, College of Engineering

Bachelor of Science, Computer Science, GPA: 3.26

East Lansing, MI

September 2023 - April 2027

PROJECTS & OUTSIDE EXPERIENCE

Knowmedic

Brighton, MI, USA

Founder and Lead Developer

May 2025 - Present

- Built a React Native (Expo) app for students and the public to summarize, bookmark, and digest PubMed research (30M+ records)
- Implemented Firebase Auth + Firestore with unique-username reservation and a callable Delete Account function via recursively deletes all user data
- Orchestrated a serverless ingest pipeline (Pub/Sub + Cloud Functions v2); scheduled 4-hour trending refreshes and 72-hour cleanups via Cloud Scheduler
- Optimized backend costs via batching, pruning, and scheduler tuning; cut daily GCP spend to <\$1
- Designed a time-decay Trending algorithm with interaction weights; added 3 Firestore triggers to update scores on votes and new comments
- Prototyped semantic search in BigQuery by creating over 30 million embeddings; used IVF vector indexes for fast k-NN retrieval

Personal Portfolio Website

Brighton, MI, USA

Creator

July 2024 - Present

- Constructed and built a personal portfolio website using HTML, CSS, and JavaScript
- The website showcases skills, experience, and projects. Link can be found on LinkedIn

Michigan Tech Week Hackathon

Detroit, MI, USA

Team Lead

September 2024 - October 2024

- Engineered an application to simplify organizing local events, promoting increased physical activity across Michigan
- Led team as backend head, creating a Flask application to store user information in a database. Integrated Google Maps API to display local events on a map

PROFESSIONAL EXPERIENCE

Artas Italian

Brighton, MI, USA

Host/busser/cook

June 2024 - August 2024

- Performed hosting, bussing, and part-time cooking roles at a high-end Italian restaurant serving 50+ customers nightly
- Enhanced communication and teamwork skills by collaborating with a team of 7+ kitchen and wait staff to assure timely and accurate service

Michigan Roots Gardening

Howell, MI, USA

Landscaper

May 2021 - August 2022

- Served as a landscaper for two summers at a landscaping company catering to high-end clients in the Metro Detroit area
- Collaborated with 50+ clients to design and implement landscape plans, enhancing communication and problem-solving skills. Completed projects as part of a team and individually, meeting deadlines and maintaining high standards

SKILLS

- **Languages:** JavaScript, Python, C++, Java, SQL, HTML/CSS
- **Mobile & Web:** React Native (Expo), React, Flask Cloud & Backend: Firebase (Auth, Firestore, Storage, Cloud Functions v2), Google Cloud (Pub/Sub, Cloud Scheduler, BigQuery)
- **Data & Search:** Semantic search, embeddings, vector search (HNSW/IVF), cosine similarity, hybrid search (keyword + vector re-rank), APIs (PubMed eUtils)
- **Release & Tools:** Git/GitHub, npm/yarn, Xcode, EAS, GitHub Pages Security & Compliance: Account deletion flows (recursive), privacy policy & terms

RELEVANT COURSEWORK

Algorithms and Data Structures, Software Design, Info management and the Cloud, Computer Systems