

# JOSEPH MARCOTTE

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## Education

### University of Michigan

Expected Grad: Dec 2025

*Bachelor of Science in Engineering, Computer Science*

*Ann Arbor, MI*

- Relevant Courses: Data Structures and Algorithms, Database Management Systems, Data Driven Web Applications, Foundations of Computer Science, Computer Security, Intro Computer Organization, Data Science, Technical Writing
- GPA: 3.33/4.00

## Technical Skills

**Languages:** Python, C++, C, TypeScript, JavaScript, Node.js, SQL, HTML, CSS, Google Apps Script, VB.Net, XSLT  
**Technologies/Frameworks:** Vue, Vuex, React, Rest APIs, CircleCI, Google Cloud Platform, Docker, Jira, Postman API  
**Methodologies:** Agile, Git, Test Driven Development, Object Oriented Design, CI/CD, Microservice Architecture, Linux

## Work Experience

### Credit Karma

May 2024 — August 2024

*Software Engineering Intern | Python, Apache Airflow, CircleCI, Unit Testing, Big Query*

*Charlotte, NC*

- Created model training data pipelines in Apache Airflow using Python to reduce time for end to end testing by 92% and mean time to detection. These pipelines perform SQL validations and send summary reports to Slack.
- Implemented a CI/CD pipeline with Python and CircleCI, including unit and coverage tests, resulting in a 40% decrease in compute costs for Google Cloud Platform virtual machines.
- Integrated team datasets into a data observability platform, enabling automated data health alerts with customizable metrics. Set up Slack integration for real-time notifications to data science teams, shrinking compute resource usage.

### Covenant Eyes

May 2023 — August 2023

*Software Engineering Intern | Vue, TypeScript, Node.js, SQL, Rest APIs*

*Owosso, MI*

- Optimized member account review and management processes from two separate applications down to one by integrating into Zendesk, a Customer Relation Management System; harnessed data from nightly cron jobs, and automates account data sharing between managers and customers, reducing account management time.
- Led migration from a legacy application to a new internal tool microservice with Vue, Typescript, Node.js, and SQL to optimize managing promo codes and their affiliates, which streamlines affiliate linking and presents insightful data requested by user feedback throughout agile development life cycle.
- Elevated backend's Rest APIs by utilizing Typescript, Node.js, and SQL, along with Typescript Zod data validation library for thorough HTTP request and response validation.
- Transformed frontend by applying Vue, Vuex State Management, Typescript, HTML, CSS, and APIs across multiple microservices and third-party systems.
- Collaborated across teams, followed Agile practices, and utilized CI/CD pipelines for efficient development

### Michigan Dining

September 2022 – Present

*Software Engineer | Google Cloud Platform, Google Apps Script, Visual Basic*

*Ann Arbor, MI*

- Automated daily audits to run nightly using Google Cloud Platform, and Google Apps Script to pinpoint vendor invoice discrepancies and generate reports for the program manager saving the university \$50,000 monthly.
- Developed macros in Visual Basic for Excel to efficiently transform raw and unstructured data from Excel files into well-organized and tailored tables, aligned with specific department or unit requirements which streamlines data processing.
- Managed a Google Web App for logging employee's overtime hours and includes supporting developer documentation. Built with jQuery, HTML, and CSS for frontend, and Google Sheets for the backend

## Projects

### NFL Game Historical Data | React, React Router, JSON

August 2022

- Designed and implemented a user-friendly React application for NFL Game Historical Data where users can conveniently access and display team data within their chosen timeframes.
- Leveraged Node.js to fetch data from a JSON file, incorporated React Router for seamless component navigation, and enabled users selections to be stored in Local Storage, which enhanced data analysis efficiency by presenting neatly formatted tables of NFL Data