

# Ryan MacKellar

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**Applied Mathematics Graduate | Software, Automation & AI Tools**

## SUMMARY

Applied Mathematics graduate with an Engineering Sciences minor and 3.914 GPA, building full-stack software, AI/ML projects, and data-automation tools. Strongest in turning messy real-world workflows into working systems across Next.js/TypeScript, Python, PostgreSQL, Prisma/Supabase, Stripe, and OpenAI API.

## TECHNICAL SKILLS

**Languages:** TypeScript, Python, C, HTML/CSS

**Full-Stack:** React, Next.js App Router, PostgreSQL, Prisma, Supabase, Vercel, APIs, Auth.js

**AI/Data:** OpenAI API, NumPy, pandas, Matplotlib, machine learning fundamentals, statistical modeling, Excel

**Integrations/Tools:** Stripe Checkout/webhooks, Google Calendar, Resend, UploadThing, Git/GitHub, VS Code, Linux, ESLint

**Engineering:** SolidWorks, CAD, Arduino, Raspberry Pi, oscilloscopes, 3D printing, CNC routing

## EDUCATION

**Grand Valley State University - B.S. in Applied Mathematics | May 2026**

Minor: Engineering Sciences | GPA: 3.914/4.000 | Summa Cum Laude | Frederik Meijer Honors College | Dean's List Every Semester

Coursework: Calculus I-III, Differential Equations, Linear Algebra I-III, Mathematical Modeling, Engineering Physics I-II, CAD/Engineering Design

## TECHNICAL PROJECTS

**WrenchTime OS - Full-Stack Business Operations Platform**

**Founder/Developer | Next.js, React, TypeScript, PostgreSQL, Prisma, Supabase, Vercel, Stripe, OpenAI API**

- Built a private operations platform for WrenchTime Cycles to manage quote workflows, scheduling, payments, customer communication, expenses, CPA exports, ad attribution, and growth analytics.
- Implemented Google/Auth.js admin allowlist, Stripe Checkout/webhooks, Google Calendar, Resend, UploadThing, and read-only Mercury transaction workflows.
- Added growth-intelligence and AI advisory workflows around Google/Meta tracking, campaign attribution, estimated gross profit, tracking health, and structured recommendations.

**Hope Network Industries Data Extraction Tool - Mathematics Senior Capstone**

**Primary Coder/Data Compiler | Excel, Python, Jupyter, VS Code, Data Automation**

- Built a local data-extraction tool for a university-sponsored industry capstone, consolidating fragmented Excel-based quoting files into standardized outputs for analysis.
- Designed custom functions, mapping templates, and quote-list workflows to handle inconsistent source files and complex data points under NDA/IP constraints.
- Delivered core functionality within a compressed four-week implementation window after receiving full data packages late in the project.

**AI From First Principles + Motorcycle Part Detector - Honors Senior Project**

**Independent Developer | Python, Machine Learning, Computer Vision, NumPy, pandas, Matplotlib**

- Completed an honors project explaining the mathematical foundations of AI/ML through written analysis and Python implementations.
- Built models including handwritten digit recognition and a computer vision model trained to identify visible motorcycle parts from images/video frames.
- Completed the project independently within roughly three months after starting with minimal AI/ML background.

## EXPERIENCE

**Tupelo Honey - Server | Grand Rapids, MI | Aug 2023-Present**

- Serve approximately 100 guests per typical shift; peak shifts exceed 150 guests and up to 11 tables, including large parties and high-volume sections.
- Balance guest satisfaction, timing, restaurant operations, and conflict resolution during fast-paced weekend and brunch service.

**Grand Valley State University - Physics Tutor | Aug 2024-Dec 2024**

- Tutored calculus-based and lower-level physics; translated equations, physical intuition, and unfamiliar problems into clear solution steps.

## CERTIFICATION

Certified SolidWorks Associate - Grand Valley State University | Issued Apr 2023 | Credential ID: C-3QN2AXB79R