# Nicholas Walvoord

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EDUCATION

# University of Michigan

Ann Arbor, MI

B.S.E in Computer Science and Engineering, Mathematics Minor

• **GPA:** 3.96/4.0

• Coursework: Data Structures & Algorithms, Web Systems, Computer Organization, Linux Pragmatics, Object Oriented Programming, Linear Algebra, Probability Theory, Vector Calculus, Discrete Math

EXPERIENCE

Datadog

New York, New York

Expected Graduation: May 2027

Software Engineering Intern - Integrations Developer Platform

May 2025 - Present

• Building content syncing feature to reduce time to market by 2 days on avg. for 800+ third party and internal integrations.

Michigan Mentors

Ann Arbor, MI

Co-Founder, Director of CS Program

Sep 2023 - Present

- Taught free intro to computer science summer course for high school students with 28+ participants. Produced 6 weeks of original lecture content, curated problem sets, and special topics sessions on professional development.
- Led partnership with Columbia-affiliated nonprofit Aiphabet, doubling student enrollment and adding 4+ AI modules.

Puppod

Software Engineering Intern

 $\begin{array}{c} {\rm Remote} \\ {\rm Mav} \ 2024 - {\rm Aug} \ 2024 \end{array}$ 

- Crafted end-to-end machine learning application to visualize and interpret data from 130k+ user game sessions.
- Developed backend API with Flask, Pandas, and scikit-learn's random forest regression model to serve user activity predictions and analysis front-end dashboards implemented in React.js and Next.js.
- Identified 3 product miscalibrations with platform and recommended fixes, increasing monthly target user retention by 23%.

Simbi

Student Engineer - Develop For Good

Jun 2024 - Aug 2024

- Constructed and styled over 16 mobile app screens and components, using custom React Native user navigation and Zustand user information storage to improve security and scalability, modernizing app user experience for 1k+ active profiles.
- Reviewed 10k+ lines of code in GitHub pull requests in collaboration with Engineering Manager, ensuring modular and maintainable codebase and successful completion of 200+ project tasks while refactoring 9-year-old Simbi app.

## Atlas Digital Consulting

Ann Arbor, MI

Software Analyst

Jan 2024 - May 2024

- Implemented standalone recruitment portal for new members with React and Vercel, streamlining workflows and improving user experience by eliminating 4+ dependencies and automating member tasks, saving 20+ hours per recruitment cycle.
- Engineered back-end functionalities with Google Firebase, Firestore, and Authentication services, elevating app functionality by outlining admin, reviewer, member, and applicant levels of access and enabling platform scaling to 500+ applicants.
- Built 20+ web pages aligned with provided designs using React is and MUI components, boosting total applications by 10%.

### Projects

# Machine Learning Basketball Statistics & Analytics Platform

Jan 2025 - Apr 2025

- Developed multi-modal computer vision pipeline to map basketball player and ball movements onto virtual court mini-map to track 10+ custom and traditional player and team statistics using Python for VC-funded startup Zephyr in team of three.
- Streamlined workflows for 4+ top-25 NCAA teams by formalizing metrics, cutting 2+ hours of manual work per game.

### ContribuTech - J.P. Morgan Chase Code For Good Hackathon

Oct 2024

- Spearheaded fullstack development of nonprofit board member sourcing and matching portal using Node.js and MongoDB back-end API methods to facilitate novel and scalable client matching algorithm for 500+ Delaware nonprofit organizations.
- Devised and assembled 10+ dynamic React web pages with Google Oath login, ensuring a secure and seamless user interface.

#### Forum Posts Classifier

Apr 2024

- Designed and trained naïve Bayes machine learning classifier that reads and processes student posts via CSV files, calculates log-probability score of each post, and predicts labels for each given Piazza post with 87% accuracy (n=3000).
- Coded Map interface in C++ on top of custom Binary Search Tree and Iterator libraries to utilize as key data structures.

### SKILLS & ADDITIONAL

- Languages: C/C++, Python, JavaScript/TypeScript, HTML/CSS
  - Frameworks/Technologies: PostgreSQL, Node.js, React.js, React Native, Flask, Pandas, Numpy, scikit-learn
  - Interests: Swimming, Water Polo, College Football, NBA, Jazz Music, NYTimes Games, Wikipedia Browsing