Nicholas Walvoord

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Education

University of Michigan — Ann Arbor, MI

B.S.E in Computer Science and Engineering, Mathematics Minor — Expected Graduation: May 2027

- **GPA:** 3.9/4.0
- **Coursework:** Operating Systems, Data Structures & Algorithms, Web Systems, Computer Architecture, Linux Pragmatics, Object Oriented Programming, Linear Algebra, Probability Theory, Math of Finance, Vector Calculus, Discrete Math

Experience

Five Rings — New York, New York

Incoming Software Engineering Intern — June 2026 – Aug 2026

Datadog — New York, New York

Software Engineering Intern - Integrations Developer Platform — May 2025 – Aug 2025

- Developed AI writing assistant with React, Python backend, and OpenAI APIs, used by 25+ engineers monthly and reduced documentation team's manual review cycle by 2 days per integration for 800+ Datadog software integrations.
- Built fullstack asset syncing feature with Python API and PostgreSQL database to automate reviewer–engineer communication, shortened average time-to-market by 10% for all new Datadog app integrations.
- Redesigned homepage with server-side search and filtering, improving scalability and UX for 45+ engineering end-users.

Michigan Mentors — Ann Arbor, MI

Co-Founder, Director of CS Program — Sep 2023 – Present

- Founded and taught free intro to computer science summer course for high school students with 28+ participants. Created 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 — Remote

Software Engineering Intern — May 2024 – Aug 2024

- Crafted end-to-end machine learning application to analyze 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.

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.js and MUI components, boosting total applications by 10%.

Projects

Machine Learning Basketball Statistics & Analytics Platform — Jan 2025 - Apr 2025

- Constructed 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-backed startup Zephyr.
- Streamlined workflows for 4+ top-25 NCAA teams by formalizing metrics, cutting 2+ hours of manual work per game.

J.P. Morgan Chase Hackathon - ContribuTech — 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 Oauth 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:** Python, C/C++, JavaScript/TypeScript, SQL
- **Frameworks/Technologies:** PostgreSQL, Node.js, React.js, git, Flask, Pandas, OpenAI API, scikit-learn
- **Interests:** Water Polo, Weightlifting, NFL, College Basketball, Amateur Cooking, Traveling, Jazz Saxophone