

# Ethan Perry

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## EDUCATION

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### Wheaton College

Norton, MA

*Bachelor of Arts in Computer Science, GPA 3.98/4*

*Aug. 2021 - May 2025*

*Bachelor of Arts in Mathematics, GPA 3.97/4*

*Aug. 2021 - May 2025*

**Relevant Courses:** *Software Engineering, Web Development, Data Structures, Algorithms, Machine Learning*

## TECHNICAL SKILLS

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**Languages:** C++, Javascript, C, Python, R, PHP, SQL, HTML, CSS, MIPS Assembly

**Technologies:** Node.js, Express, Typescript, MongoDB, RESTful API, MySQL, jQuery, Bootstrap

**Tools:** Git, GitHub, Bash, VS Code, CLion, RStudio, PyCharm, Excel, Mathematica

## PROJECTS

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### Student Marketplace App | *Node.js, Express, MongoDB, Typescript, RESTful API*

- Engineered application back-end infrastructure using Node.js and Express, building robust APIs to facilitate seamless communication between buyers and sellers, ensuring smooth platform functionality
- Integrated MongoDB for database management while implementing secure data handling practices with Json Web Tokens to maintain integrity and support efficient storage and retrieval of product information
- Strategically integrated Gemini AI API to parse user uploaded images and auto-fill the form data for their listings
- Designed web-socket backend up to industry standards for real time in-app chat between buyers and seller to contain all user experience within the app
- Collaborated using Agile methodologies, conducting bi-weekly sprint cycles, regular code reviews with Git version control, and progress tracking meetings to ensure timely delivery of tangible project milestones

### Terrain Reconstruction Visualizer | *Javascript, HTML/CSS, jQuery, Plotly.js, C++*

- Developed a web-based tool for Digital Elevation Model (DEM) visualization
- Implemented dynamic user interaction for effective interface features with Javascript and Bootstrap
- Integrated Inverse Distance Weighting (IDW) as a means of interpolating incomplete or sparse input data files
- Extracted and processed additional sample elevation data using qGIS software for enhanced user experience

### Full-Stack Photobook Emulator | *Javascript, PHP, MySQL, Bootstrap, HTML/CSS*

- Collaborated with a peer programmer to design and deploy a simulated photo album creation webpage, utilizing HTML, JavaScript, and PHP to deliver a seamless user experience, demonstrating proficiency in full-stack development
- Developed a full-stack system to save and restore user progress data, leveraging relational databases (SQL) and JavaScript cookies, showcasing expertise in data persistence and efficient data management
- Engineered an optimized database architecture to enable fast data retrieval, reducing buffering times and improving user experience, aligning with the need for efficient software design and development

## EXPERIENCE

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### Lead Geospatial Interpolation Researcher

May. 2024 – Aug. 2024

*Wheaton College*

*Norton, MA*

- Guided academic research pathway by reviewing contemporary academic articles to clearly define my research niche
- Explored the application of several machine learning techniques, such as Random Forest, XGBoosting, and Neural Networks, to develop a terrain reconstruction algorithm
- Gained valuable academic experience which translated into applicable programming skills to extend GIS research
- Collaborated with my research advisor to create a robust and productive academic environment to achieve collective goals and iteratively update research question

### Computer Science and Mathematics Peer Tutor

Jan. 2022 – May 2025

*Wheaton College*

*Norton, MA*

- Providing customized instruction to students in eight different math and computer science courses
- Collaborate with fellow tutors to organize groups of students into dynamic study sessions
- Manage an active log summarizing and reflecting on each tutoring session to improve communicative ability
- Actively participating in monthly workshops to incorporate valuable feedback in active listening and effective communication