# Ethan Perry

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# EDUCATION

#### Wheaton College

Norton, MA

Bachelor of Arts in Computer Science, GPA 3.97/4

Aug. 2021 - May 2025

Bachelor of Arts in Mathematics, GPA 3.96/4

Aug. 2021 - May 2025

Relevant Courses: Web Development, Data Structures, Algorithms, Object Oriented Programming, Machine Learning

#### TECHNICAL SKILLS

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, Linux, VS Code, CLion, RStudio, PyCharm, Excel, Mathematica

#### Projects

# 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 to ensure smooth platform functionality
- Integrated MongoDB for database management, implementing secure data handling practices with Json Web Tokens to maintain integrity and support efficient storage and retrieval of user and product information
- Strategically designed application wireframes and tech stack while prioritizing scalability and user experience
- 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++

- Delivered an innovative web-based site for Digital Elevation Model (DEM) visualization
- Implemented dynamic user interaction features for smooth user experience 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 modeling capabilities

# 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 HTML5, 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 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

### 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 project 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

#### Computer Science and Mathematics Peer Tutor

Jan. 2022 - Present

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 performance feedback in topics like active listening and effective communication