

Joshua Aney

Contact Information

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Employment

Mayo Clinic (May – August 2024, 2025), Rochester, MN

- Conducted research in a neuroscience lab, focusing on applying machine learning techniques to stereo electroencephalography(sEEG) data.
- Performed data preprocessing, feature extraction, and model evaluation for sEEG signal classification.
- Worked with a multidisciplinary team to integrate findings and refine experimental protocols for sEEG analysis.

Bobcat Anderson Tennis Center (2023 - Current), Bozeman, MT

- Worked as a desk attendant working exclusively with the software CourtReserve to manage customers memberships and court reservations.
- Worked as a tennis instructor coaching kids between the ages of 5 and 11 with class sizes up to 6.
- Planned, organized, and lead group tennis lessons

Tyrol Ski and Sports (2020 – Current (Winter)), Rochester, MN

- Ability to research and stay on top of relevant trends and performance matrix of ski equipment.
- Expert in winter apparel as well as ski gear.
- Presenting information to customers to aid in their purchasing decisions.
- Aided in sharpening, waxing, and repairing skis requiring a high level of attention to detail.

Rochester Tennis Connection (2018 – Current (Summer)), Rochester, MN

- As an administrative assistant, worked directly with customers to resolve all their needs including account management, court reservations, and lesson scheduling.
- Worked with a team of tennis instructors organizing practices, and coaching kids between the ages of 5 and 16 with class sizes up to 10.
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Skills

Hard Skills: Java, Python, C, HTML, CSS, C#, .NET Core, Entity Framework Core, Numpy, Pandas, Pytorch, Scikit-Learn, Data preprocessing, GitHub, Mapbox, Linux, Razor Pages, UML(Unified Modeling Language)

Soft Skills: Strong verbal and written communication skills, Team-oriented mindset, Leadership, Problem Solving, Customer Service, Teaching/Instructing, Organization

Projects

Machine Learning Models from Scratch (Python, UML, Technical Writing)

- Coded the following without any Machine learning libraries
 - o K-Nearest Neighbors classification and regression model with an edited K-Nearest Neighbors implementation as well.
 - o K-Means and DBSCAN clustering models
 - o Densely Connected Neural network with an arbitrary number of hidden layers and nodes that used backpropagation, the genetic algorithm, and particle swarm optimization as the training methods
- Created a thorough design document explaining the structure and timeline of each experiment.
- Wrote a technical writeup explaining the purpose, datasets used, methods, and results of each experiment.

Bozeman Bike Trails Application (C#, HTML, CSS, Razor Pages, .NET Core, Mapbox, SQL, Entity Framework Core)

- Developed a web application that enables users to create accounts, log in securely, and track the bike trails they have ridden.
- Integrated user authentication with ASP.NET Core Identity for secure user access.
- Allow users to upload GPX files which get parsed and stored in a relational database using Entity Framework Core.
- Rendered interactive 3D trail maps using Mapbox GL.
- Implemented filtering and search functionality to organize and display user's trails based on certain attributes.

Education

Montana State University (Expected Graduation May 2026)

- Major: BS Computer science (Fourth year, GPA: 3.95)
- Dean's List Fall 2022/Fall 2024 (3.5+)
- President's List Spring 2023/Fall 2023/Spring 2024/Fall 2025 (4.0)

Relevant Coursework: Java Programming, C Programming, Python Programming, Data Structures and Algorithms, Terminal Use, Working in a Linux server, Discrete Structures, Technical Writing and Communication, Linear Algebra, Github, Machine Learning, UML, Software Design

School Involvement

Co-president of the Montana State University Tennis club

- Organized and planned weekly group practices for groups of up to 40 participants
- Managed registration, funds, and other logistics with Montana State University
- Delegated responsibilities among officers and led meetings

Section Leader of the Montana State University Drumline

- Facilitated communication between section members
- Organized sectional practices
- Promoted a supportive and disciplined rehearsal environment