

Hayden Berberich

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EDUCATION

University of Missouri–St. Louis

St. Louis, MO

Bachelor of Science in Computer Science, Certificate in Artificial Intelligence

Aug. 2021 – Dec. 2024

- Pierre Laclede Honors College Dean's List
- GPA: 3.734

EXPERIENCE

Technical Support Engineer

July 2024 – Present

Joe's Records

St. Louis, MO

- Diagnosed and resolved hardware, software, and network issues, ensuring minimal downtime and high efficiency.
- Developed scripts and small-scale programs to automate repetitive tasks and enhance system functionality, improving efficiency and accuracy.
- Collaborated with other software engineers to develop and maintain a website, contributing to the implementation of key features that resulted in increased sales.

Computer Science Tutor

June 2024 – Present

Self-Employed

St. Louis, MO

- Provided one-on-one tutoring in Computer Science with a focus on JavaScript, fostering a deep understanding of programming concepts.
- Cultivated a learning environment that encouraged questions and clarified complex concepts effectively.
- Helped the student improve grades, complete the course, and better understand programming concepts.

PROJECTS

Original Language Compiler | *C++, Assembly*

- Developed a compiler for an original programming language, featuring a scanner, parse tree, static semantics checker, and code generation to convert high-level code into executable machine code.

Operating System Simulator | *C++*

- Created an operating system simulator enabling process scheduling, resource management, and memory allocation, employing operating system principles and functionalities.

Artificial Intelligence | *Python, Jupyter Notebook*

- **Natural Language Processing:** Developed a model to analyze and explain chess positions, translating board configurations into human-readable descriptions and providing strategic insights.
- **Machine Learning:** Implemented various machine learning models, including Neural Networks, Support Vector Machines, Logistic Regression, Linear Regression, Simulated Annealing, and Perceptron Learning Algorithm, to solve classification and regression problems.
- **Data Mining:** Applied data mining techniques such as BIRCH, SPADE, Support Vector Machines, and Decision Trees to analyze and extract meaningful patterns from large datasets, and created visualizations to effectively communicate insights and trends.

Full Stack Web Page | *HTML, CSS, PHP, JavaScript, SQL*

- Developed a dynamic webpage that enabled users to create and save accounts, securely store account information, and featured visual effects for enhanced user experience.

Computer Vision | *Python*

- Utilized OpenCV to implement a variety of image processing techniques, including Huffman image compression, interactive histogram equalization, lomographic filtering, histogram enhancement, image resampling, and building an image corpus and browser.

SKILLS

Languages: C++, C, Python, Java, HTML, CSS, JavaScript, PHP, SQL, R, Racket, Prolog

Tools: Git, GitHub, Jupyter Notebook, Linux, Windows, Microsoft Office Suite, Google Workspace, GIMP

Soft Skills: Problem-Solving, Teamwork, Adaptability, Time Management, Communication, Critical Thinking