# SAGE WALSH SMITH

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#### **SKILLS**

- Data analytics, Mathematical Modeling, Statistics, Python, SQL, R, Java, C, MATLAB, Racket, Excel, Git, GitHub, HTML
- Detail-oriented, strong communicator, collaborative, problem-solving, time management, quick learner, adaptable

#### **EDUCATION**

## Western Washington University | Bellingham, WA

September 2019 - December 2024

B.S. Applied Mathematics

 Relevant Coursework: Data Structures and Algorithms, Probability and Statistics, Linear Algebra, Multivariable Calculus, Mathematical Modeling

#### **PROJECTS**

#### **Handwritten Digit Recognition AI Neural Network**

- Developed a full-stack AI web app featuring a neural network trained on the MNIST dataset using TensorFlow, with real-time inference and performance visualization
- Built and deployed an interactive frontend with JavaScript and Canvas API, integrated with a Flask backend to demonstrate
  end-to-end neural network deployment in a web environment

#### AI Stock Market Fortune Teller

- Created an interactive Python application that delivers real-time stock insights using Yahoo Finance API and Ollama LLM
- Introduced a novel gamified twist with TarotAPI, merging financial forecasting with creative storytelling

#### MATLAB Simulation of Surface Temperature Over Time for Convergence Analysis

- Simulated environmental temperature changes over time using MATLAB to investigate convergence behavior
- Gathered and synthesized data from multiple sources to support analysis and validation of results

## Thought Atlas: An AI Rabbit Hole - AI-Powered Knowledge Mapping Web App

- Developed a browser-based tool that visualizes relationships between concepts by combining Ollama LLM, Wikipedia API, NetworkX, and D3.js
- Leveraged NLP and graph theory to enable intuitive, exploratory learning across disciplines

## **Age Prediction Using Exercise Data Analysis**

- Built a predictive model in R to estimate gym members' age based on exercise metrics, applying linear algebra techniques and statistical analysis
- Visualized trends using real-world Kaggle data to explore potential correlations

#### **Dress Up Game**

- Designed and programmed a playful, full-stack web app allowing real-time avatar customization
- Managed frontend interactions with JavaScript and styled with HTML/CSS, while Flask powered asset management and state
  handling on the backend

#### **WORK EXPERIENCE**

#### **Jimmy John's:** Delivery Driver

January 2023 - April 2023

- Demonstrated punctuality and reliability in a fast-paced environment
- Managed transactions, including cash handling and point-of-sale systems
- Developed strong communication and interpersonal skills while interacting with customers