

# Tristan Michael Hertzog

## Education

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### Western Washington University, Bellingham, Washington

*Data Science B.S. and Mathematics Minor*

GPA: 3.50

**Expected graduation: June 2026**

Relevant Course Work:

Data Structures, Object Oriented Design, Database Systems, Linear Optimization, Linear Algebra, Probability and Statistics, Data Modeling and Visualization, Machine Learning, Deep Learning, and Natural Language Processing.

## Skills

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*Insightful and analytical Data Scientist with hands-on project experience*

**Data Science Libraries:** NumPy, Pandas, Scikit-learn, Matplotlib, Pytorch, Seaborn, Beautiful Soup, and Weights & Biases

**Programming Languages:** Python, SQL, R, Java, JavaScript, C#, Racket, and Dart

## Projects

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### Python Neural Network:

Developed a fully custom **neural network** from scratch in **Python**, implementing **forward/backpropagation**, with the option of **minibatch** or **stochastic gradient descent**, and model training without external ML frameworks.

### Data Augmenter:

Built a web-based image augmentation tool using **JavaScript**, **HTML**, and **CSS**, leveraging **Fabric.JS** to apply visual filters and generate bulk user-specified batches of modified photos for download.

### Senior Project Golf AI Coach:

Creating an advanced golf-training system in **Python** using **PyTorch**, designed to record and analyze swing footage.

The system employs a **convolutional deep neural network** to evaluate biomechanics, track performance metrics, and deliver personalized, interactive improvement feedback.

## Extra-Curricular Activities

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### Academic Student Software Club

**Dec 2022 - Ongoing**

*Registered club at Western Washington University*

*Role: Club Founder, Lead Officer*

The Academic Student Software Club is a STEM aligned club that focuses on collaboration between students.

#### Position Held and Responsibilities in Organization

As the Founder and current Lead Officer of the club, my responsibilities include organizing events, creating agendas, collaborating with members, and ensuring compliance with university and club policies.

#### Projects:

Web development, Sudoku generator/solver, 3D modeling, Unity game development, and quantum computing application

## Work Experience

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### Woodland Park Zoo, Grounds Crew Member – Summer 2024, Seattle, WA

**Pizza Hut, Cook – 2021-2022, Everett, WA**

**Lawn Care and Vacation House Management – 2017-2019, Mill Creek, WA**