### Luke Sheldon

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#### <u>Education</u>

Bachelor of Science - Computer Science, Expected in 05/2026 Minors in Data Science and Actuarial and Financial Mathematics Clark University - Worcester, MA

**Academic Honors** - All NEWMAC Academic Team **Skills** 

### **Relevant Coursework**

Algorithms • Data Structures • Discrete Structures • Linear Algebra • Database Management • Applied Machine Learning • Assembly Language • Multivariate Calculus • Software Development

- Languages: Python, Java, Kotlin | ML: Sk-Learn, Keras, PyTorch, Tensorflow | Tech: Docker, Git, AWS
- Web Development: HTML, CSS, Django | Databases: SQL, Pinecone, Firebase | Other: Agile, Waterfall

## **Work History**

Teacher's Assistant, 01/01/2023 to present • Clark University – Worcester, MA

- Intro to Computing and Intro to Data Science Peer Learning Assistant.
- Provide instructional support to approximately 40 students.
- Collaborate with professors to develop course lesson plans and instructional materials in advance of and during the semester.

### **Data Annotator**, 04/01/2024 to present • **Data Annotation** - Remote

- Work with and label data from different AI models, specifically LLMs, in order to fine tune and improve the quality of these models' generative capabilities.
- Rate responses from AI chatbot models given specific and intentional prompt generation.

# Youth Soccer Coach, 05/18/2023 to 08/18/2023 • Super Soccer Stars, Youth Athletes United - Los Angeles, CA

- Coach and instruct soccer fundamentals to youth athletes ranging from two to five years old during three sessions per day.
- Plan training sessions touching on multiple core sport concepts, including motor skills, active listening, critical thinking, teamwork, sportsmanship, etc.
- Communicate with parents, supervisors/co-workers, and participants in order to ensure optimal training sessions and create a safe, streamlined, and effective learning environment.

### **Projects**

### Personal Web App Portfolio | January 2024

HTML, CSS, Javascript

• https://transcendent-nougat-45ce58.netlify.app/

### The NEWMAC score Predictor | September - December 2023

Python, Sk-Learn

- Developed machine learning models utilizing historical NEWMAC soccer data.
- Implemented three models—Logistic Regression, Decision Tree, and Random Forest Algorithms.
- Emphasized the importance of continuous testing, refining, and tuning to maintain and improve the predictive quality of each machine learning model over time.

### Discover O-Chem Semantic Search Engine | January 2025 Python, AWS, Hugging Face, Pinecone, PHP

- Developed a semantic search engine for an online organic chemistry textbook, testing the effectiveness of different methods for generating text embeddings such as LLMs, GloVe, and word frequency vectors.
- Leveraged AWS Bedrock for cloud based embedding generation and pipeline deployment.
- Utilized Pinecone's vector database to store and manage text embeddings, enabling fast and accurate similarity searches for user queries.

### Stock Sentiment Analysis | July 2024

## PyTorch, Keras, BERT, Spacy, Python

- Explored and processed a news dataset using NLP techniques like tokenization, Named Entity Recognition, and stopword removal with the goal of drawing correlation between news headlines and price movement.
- Leveraged BERT for high quality text embeddings that were further processed for use in classification.

### **Activities**

Clark Competitive Computing Club - Vice President Clark University Varsity Men's Soccer - Forward

Alpine Skiing and Snowboarding Club - Treasurer