

## Luke Sheldon

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### Education

**Bachelor of Science** - Computer and Data Science, Spring 2026

**Minor** - Actuarial and Financial Mathematics

**Clark University** - Worcester, MA

**Academic Honors** - All NEWMAC Academic Team

### Relevant Coursework

Algorithms • Data Structures • Linear Algebra •  
Probability and Statistics • Multivariate Calculus •  
Applied Machine Learning • Computer Networks •  
QA and Automation • Quantitative Finance

### Skills

- **Languages:** Python, Java | **ML:** SkLearn, Keras, Tensorflow | **DevOps:** Docker, Git, AWS, Terraform, Jenkins
- **Frameworks:** Angular, Spring, Django | **Databases:** SQL, Pinecone, Firebase | **Other:** Agile, Scrum

### Work History

**Full Stack Software Engineering Intern**, 06/02/2025 to 08/08/2025 • **Fidelity Investments** - Merrimack, NH

- Collaborated with the Controls team in the Managed Account Billing space to enhance a batch application, working with Terraform to set up AWS infrastructure for the implementation of new jobs.
- Contributed to code quality through unit and end-to-end testing, utilizing JUnit and Cucumber to build out testing workflows which validated the execution of and resulting data from said jobs.
- Partnered with fellow interns to refactor and improve the UI of an internal monitoring application built with Angular.
- Supported onboarded a new full time engineer and maintained up-to-date documentation for the batch app.

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

- Intro to Computing, Intro to Data Science, and Analysis of Programming Languages 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.

### Projects

**Chromatic Chat | January 2026**

**PostgreSQL, Python, Angular, FastAPI, Transformers, Docker**

- Built a vectorized knowledge base using Python and Transformer based embeddings, mapping label data to the natural color spectrum and storing vectors in PostgreSQL (PGVector) for semantic search.
- Developed and containerized a FastAPI backend, managing model and database lifecycles to enable efficient query embedding and scalable data retrieval.
- Implemented an Angular-based chat interface, creating an API service layer to asynchronously fetch, process, and display the aggregated semantic results from the backend.

**Key Classification of Music | April 2025**

**Python, Keras, FastAPI, Docker**

- Developed a CNN in Keras to classify musical audio into one of the twelve minor keys, achieving accurate key detection from raw audio inputs.
- Built a Python preprocessing pipeline to label data and convert audio files into chromagram images, enabling efficient model training and evaluation.
- Deployed a Dockerized FastAPI inference service, exposing prediction endpoints with a minimal UI.

**Health Ya Self | May 2025**

**Angular, Python, Django, Docker, HTML, CSS**

- Partnered with a local Worcester-based smoothie business to gather requirements and translate business needs into a functional web application.
- Built a sleek Angular frontend with product browsing, custom smoothie creation, and cart functionality.
- Implemented a Django backend to manage user accounts and product data.

### Activities

**Clark Competitive Computing Club** - Event Coordinator

**Clark University Varsity Men's Soccer** - Forward