



# Peyton Lambourne

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## ◦ Skills ◦

### Python Programming

Python scripting for data automation

Python, pandas, NumPy, scripting, automation

### Machine Learning

Supervised & unsupervised models

scikit-learn, TensorFlow, PyTorch, supervised learning, clustering

### Prompt Engineering & LangChain

Designing prompts & LangChain pipelines

LangChain, prompt engineering, LLM orchestration

### Retrieval-Augmented Generation & FAISS

FAISS-based semantic search pipelines

FAISS, vector embeddings, RAG, semantic search

### Streamlit App Development

Interactive ML apps with Streamlit

Streamlit, dashboards, web apps, visualization

### Full-Stack Web Development

React/Next.js frontends & Supabase backends

React, Next.js, Supabase, Stripe, REST APIs

## ◦ Certifications ◦

### Machine Learning Bootcamp

University of Utah

May 2025

Python, ML Algorithms

Data prep, Neural Networks

## Profiles

🔗 [Lambourne2](#)

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## Summary

Machine learning engineer with end-to-end experience in Python, neural nets and RAG pipelines—built CourseTutor, an AI study assistant using LangChain, FAISS and Streamlit, to help students pull context-rich answers from their materials.

## Education

### University of Utah

Computer Science

Machine Learning Bootcamp (Professional Certificate)

Nov 2024 – May 2025

Completed a six-month intensive bootcamp covering Python, data prep, statistical analysis, ML algorithms (supervised & unsupervised) and neural networks. Built end-to-end projects including a Streamlit AI tutor powered by LangChain, FAISS vector search and RAG pipelines.

### Salt Lake Community College

General Education & Intro to CS

(Associate's Coursework)

Mar 2022 – Present

Ongoing general-ed and prerequisite courses (writing, calculus, physics, introductory computer science). Maintained a 3.8 GPA while balancing full-time work and bootcamp studies.

## Projects

### CourseTutor (AI-Powered Course Tutor)

RAG-based Streamlit tutor

Served as primary developer on a Streamlit app that ingests notebooks, slides, transcripts and PDFs; embeds them with Google Generative AI; indexes with FAISS; and delivers answers via a LangChain RAG pipeline—enabling students to quickly retrieve accurate, context-rich explanations from their course materials.

LangChain, FAISS, RAG, Streamlit, embeddings, LLM

🔗 <https://github.com/anshimathur/group-4-project-3>