



"This is the best machine learning course I've done. Worth every cent."

— Jose Reyes, AI/ML at Cevo Australia

Learn to Build AI & Machine Learning Systems That Don't Suck

A live, hands-on program that will help you become an order of magnitude better at building world-class AI/ML systems.

This program is for developers looking to solve real-world problems using AI/ML.

Most courses are boring, too academic, and never talk about how to ship actual products.

This program is different. This is a practical, no-nonsense, hands-on program that will teach you [the skills you need](#) for building production systems in weeks, not months.

You'll walk away from this program having designed, built, and deployed an end-to-end AI/ML system, plus a proven playbook for selling, planning, and delivering work backed by 30 years of real-world experience.

This is the class I wish I had taken when I started.

~~\$500~~ **\$300**

Next cohort: [February 2 - 19, 2026](#)

Enroll today and you'll get **free, lifetime** access to every past and future cohort. You'll never pay another cent, ever.

[Enroll now](#)

Already a member? [Sign in](#)

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What You'll Learn

This program focuses on real-world AI and Machine Learning engineering skills.

This program is a world apart from any of those courses you've taken before:

- ✓ You'll join **20+ hours** of live, interactive sessions where you'll learn how to build **production-ready** AI/ML systems.
- ✓ You'll discover **best practices** for **building, evaluating, running, monitoring, and maintaining** systems in production.
- ✓ You'll get **hands-on** access and a complete **walkthrough** of an **end-to-end** system built entirely from scratch.
- ✓ You'll learn how to **build systems once** and **deploy them anywhere** using **state-of-the-art** techniques and **open-source** tools.
- ✓ You'll enjoy **lifetime** access to every future cohort and a **private community** where you can collaborate with thousands of students like you.

This program will completely change the way you think about Artificial Intelligence and Machine Learning. You'll ditch the typical classroom fluff in favor of practical strategies that actually work.

Session 1 - How To Start (Almost) Any Project

- ✓ How to start every project with a discovery phase and use a simple 8-question checklist to frame complex problems in ways that make useful solutions inevitable.
- ✓ Understanding the first rule of machine learning and how to use simple rules to build prototypes to validate assumptions and gather feedback.
- ✓ Determining the value of collecting additional data and understanding what a good dataset looks like.
- ✓ Converting data into numerical vectors with label encoding, one-hot encoding, target encoding, and tokenization.
- ✓ Engineering predictive features from raw data using feature engineering techniques and implementing strategies for handling missing values.
- ✓ Designing a labeling strategy and using Active Learning, uncertainty, and diversity sampling to automate labeling data at scale.

Session 2 - How To Build Better Software (That Works)

- ✓ Building Retrieval-Augmented Generation (RAG) systems to enhance language models with external, up-to-date knowledge.
- ✓ Understanding the tradeoffs between term-based retrieval and embedding-based semantic retrieval.

- ✓ Developing model-selection strategies by weighing performance, latency, and cost.
- ✓ Implementing an initial evaluation protocol by establishing a strong baseline, and using holdout sets, cross-validation, prompt engineering, and scoring rubrics.
- ✓ Implementing model versioning and tracing to keep experiments and data reproducible.
- ✓ Understanding model-centric and data-centric AI and how to use them to build and improve your models.

Session 3 - How To Build Software You Can Trust

- ✓ Implementing input and output guardrails to block harmful content and fix responses before users see them.
- ✓ Performing error analysis to find and fix the most critical failures of your application.
- ✓ Using an LLM-as-a-judge to automate the evaluation of generative models based on custom, nuanced criteria.
- ✓ Using backtesting to evaluate models on historical data, and implementing Invariance and Behavioral Testing to verify a model's consistency and behavior in critical edge cases.
- ✓ Ensuring data quality and integrity by preventing data leakages and handling class imbalance using techniques

like resampling, threshold moving, and cost-sensitive learning.

Session 4 - How To Serve Model Predictions (In A Clever Way)

- ✓ Understanding model deployment strategies and the trade-offs between static, dynamic, and hybrid serving.
- ✓ Using a model gateway to route requests, manage costs, and decouple your application from the underlying models.
- ✓ Implementing human-in-the-loop and cost-sensitive workflows to combine machine predictions with human expertise.
- ✓ Making models faster and more efficient using compression techniques like pruning, quantization, knowledge distillation, and Low-Rank Adaptation (LoRA).
- ✓ Reducing latency and cost by implementing caching strategies and understanding the difference between exact and semantic caching.

Session 5 - How To Monitor Your Models (Drift Is Awful)

- ✓ Detecting and understanding distribution shifts by learning to differentiate between covariate shift, label shift, and concept drift.

- ✓ Identifying and mitigating the impact of edge cases and feedback loops that can silently degrade your model's performance over time.
- ✓ Implementing a robust production monitoring strategy to track model inputs, operational metrics, prediction distributions, and user feedback.
- ✓ Understanding the three pillars of observability—metrics, logs, and traces—to move beyond observability into debugging of production applications.
- ✓ Implementing different strategies for testing in production, including A/B testing, canary releases, shadow deployments, and interleaving experiments.

Session 6 - How To Build Continual Learning And Agentic Systems

- ✓ Understanding different retraining strategies by comparing stateless training with stateful training.
- ✓ Learning how to prevent catastrophic forgetting, which is the tendency of models to forget previously acquired knowledge.
- ✓ Understanding the difference between simple, reliable agentic workflows and complex, autonomous agents with planning, memory, and tools.

- ✓ Using the Model Context Protocol (MCP) to standardize how agents interact with external tools and data, simplifying complex integrations.
- ✓ Leveraging the Agent-to-Agent (A2A) protocol to enable multiple agents to discover each other, delegate tasks, and collaborate to solve complex problems.

Code walkthroughs

You'll get access to an end-to-end, production-ready template system for training, evaluating, deploying, and monitoring a system.

The codebase comes with extensive documentation to help you understand how the code works and how you could change it to accommodate your needs.

Office Hours

Every week, we'll meet during office hours to answer any open questions, discuss relevant topics, and help you with any challenges you may be facing. This is also a great opportunity to connect with other students in your cohort, share insights, and talk about anything you are building or are passionate about.



"I have learned a ton from Santiago in his class and it was actually what helped inspire me and get into the MLOps work that I'm doing now. Truly one of the most helpful online courses for doing real, full-scale machine learning."



Brian H. Hough
Software Engineer

Who Is This Program For?

This is hands-on program for people willing to put in the work to build skills with real-world impact.

This program is for **software developers, data scientists, data engineers, data analysts, technical managers**, and anyone who wants to use Artificial Intelligence and Machine Learning to solve real-world problems.

Here are the prerequisites to succeed in the program:

- ✓ You are not afraid of writing code. We'll use Python, but you'll be fine if you have experience with any other language.

- ✓ You have a basic understanding of cloud services and how to build and deploy a simple API. Familiarity with Docker and containerization is not required but a helpful skill to have.
- ✓ You're not afraid to ask questions, share what you're working on, and help others grow.
- ✓ You are ready to put in the work and commit the time necessary to succeed.



"This is an awesome course! This is my second round and I continue learning. I recommend it with complete confidence."



Juan Olano

Machine Learning Engineer

Upcoming Cohorts

Each iteration of the cohort consists of six live sessions plus three office hours over three weeks.

Live sessions take place every Monday and Thursday. Office hours take place on Wednesdays. Every session is recorded. You can attend live or watch the recorded version later.

Here are the upcoming cohorts:

- ✓ Cohort 21: **February 2 - February 19, 2026.** 10:00 AM EST
- ✓ Cohort 22: **May 4 - May 21, 2026.** 2:00 PM EDT

You don't have to wait for a specific cohort to join the program.

You have lifetime access, so you can join any time and lock in the current price. The sooner you join, the cheaper it will be.



"This is one of the best classes I've ever purchased over the internet. Santiago is a terrific teacher. The ability he has to share knowledge is fantastic. I recommend this course. Worth 10x what he's charging."



Sal DiStefano

Frequently Asked Questions

If you can't find the answer to your question, please reach out and I'll be happy to help.

How long will it take to complete the program?

Set aside a minimum of 4 hours every week during the three weeks of the program to attend the live sessions or watch the recordings. You'll need an additional 2 - 4 hours if you plan to go through the codebase.

What happens if I can't attend a live session?

Every live session is recorded. If you can't attend a live session, you can catch up asynchronously later using the recording.

I'm a complete beginner. Will this program be helpful for me?

This program is not an introductory class.

While we'll discuss many fundamental ideas behind Artificial Intelligence and Machine Learning, beginners will find the sessions go much faster than what's optimal for them.

What does "lifetime access" mean?

You only pay once to join the program and get immediate access to every past, present, and future cohort.

Every new iteration of the program is better than the ones before. Many students take classes once and then join a later cohort to benefit from the updates.

The lifetime access removes any pressure from having to complete the program when life gets in the way.



Hey! I'm Santiago.

I'm the instructor of the program.

I'm a [Machine Learning Engineer](#) with three decades of experience building and scaling enterprise software and AI/ML systems.

I've had the privilege of building systems for companies like Disney, Boston Dynamics, IBM, Dell, G4S, Anheuser-Busch, HP, and NextEra Energy, among others. Across these projects, I learned what it takes to build reliable and scalable software that works.

I started this program in March 2023, and since then, more than 2,000 students have successfully graduated.

I can't wait to see you in class!



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