Welcome to the Machine Learning Engineer Career Path

Your Machine Learning Engineering journey begins here!

Hi! If you're completely new to data analysis, Python, or pandas, start with ML/AI Engineering Foundations Skill Path then join us here!

Algorithmic decision-making is to be found everywhere today. From detecting fraudulent transactions to recommending movies to figuring out the nearest car for a ride, so many of the applications we use every day rely on this. What powers these systems? Machine Learning Engineering!

About the Machine Learning Engineer Career Path

Machine learning engineering concerns itself with building robust systems that use machine learning at scale to speed up data-driven decision-making. The people who build these systems, Machine Learning Engineers, are thus one of the most highly sought after roles within tech today. This career path is designed to take the learner from zero to Machine Learning Engineer!

The career path begins with a no-code introductory module which is followed by alternating tracks on machine learning and engineering. Eventually it combines the two to teach you how to build end-to-end machine learning pipelines.

The career path currently progresses through the following five tracks:

1. Introduction
2. Machine Learning Fundamentals
3. Software Engineering for MLE's
4. Intermediate Machine Learning
5. Building Machine Learning Pipelines

Overview and Pre-requisites

If at this moment, you are wondering about any of the following questions, start with the Introduction module that follows right after this article:

- What is Machine Learning? What is Machine Learning Engineering?
- Where does a Machine Learning Engineer (MLE) sit within a Tech Company?
- How is the role of a MLE different from that of a Data Scientist or a Data Engineer?
- How would these different roles collaborate to build an app to solve a problem in a data-driven manner?

The introductory module aims to answer all of the above and provide clarity on how to make the most out of this career path as well as the Codecademy platform.

If you already have some foundational knowledge of data science and programming, the second track, Machine Learning Fundamentals would be the place to start. If not, do not worry! The Machine Learning/AI Engineering Foundations Skill Path is designed to take you through exactly all that you need to know to get started with Machine Learning fundamentals. If you're not sure, take a look at the syllabus of the Foundations Skill Path and you can decide for yourself!

We would like to stress to the learner that this career path is a Work in Progress (WIP)! :) We're in the process of building more advanced machine learning content as well as more content relating to building

ML pipelines with PySpark, cloud deployment of ML models, MLOps, etc. So it is by no means exhaustive at the moment and we're excited to bring you more advanced content soon! In the meantime, we look forward to receiving your feedback on our newest career path so we can keep improving this experience for you.

Structure

Throughout this Path, you will see lessons, quizzes, articles, and projects. Lessons and articles introduce new tools and concepts, quizzes give you a chance to quickly check your understanding, and projects give you a chance to apply your new skills.

There are a lot of projects, but pay special attention to Portfolio Projects and Cumulative Projects because they give you a chance to apply your skills and build up your portfolio.

The content in this Career Path is cumulative, and we recommend that you take the courses in order. However, if you are familiar with a given technology or idea, feel free to jump ahead. Just be aware that skipping modules will affect your completion percentage.

Finally, we are constantly updating our content to be sure it is up to date and of the highest quality. Keep an eye on the notification bells, which we will use to alert you to new content. Sometimes these updates might affect your completion percentage, and we'll always do our best to let you know with a notification bell when that might happen.

Community

Finally, learning is social. Whatever you're working on, be sure to connect with the Codecademy community in the forums. Remember to check in with the community regularly, including for things like asking for code reviews on your project work and providing code reviews to others in the projects category, which can help to reinforce what you've learned.