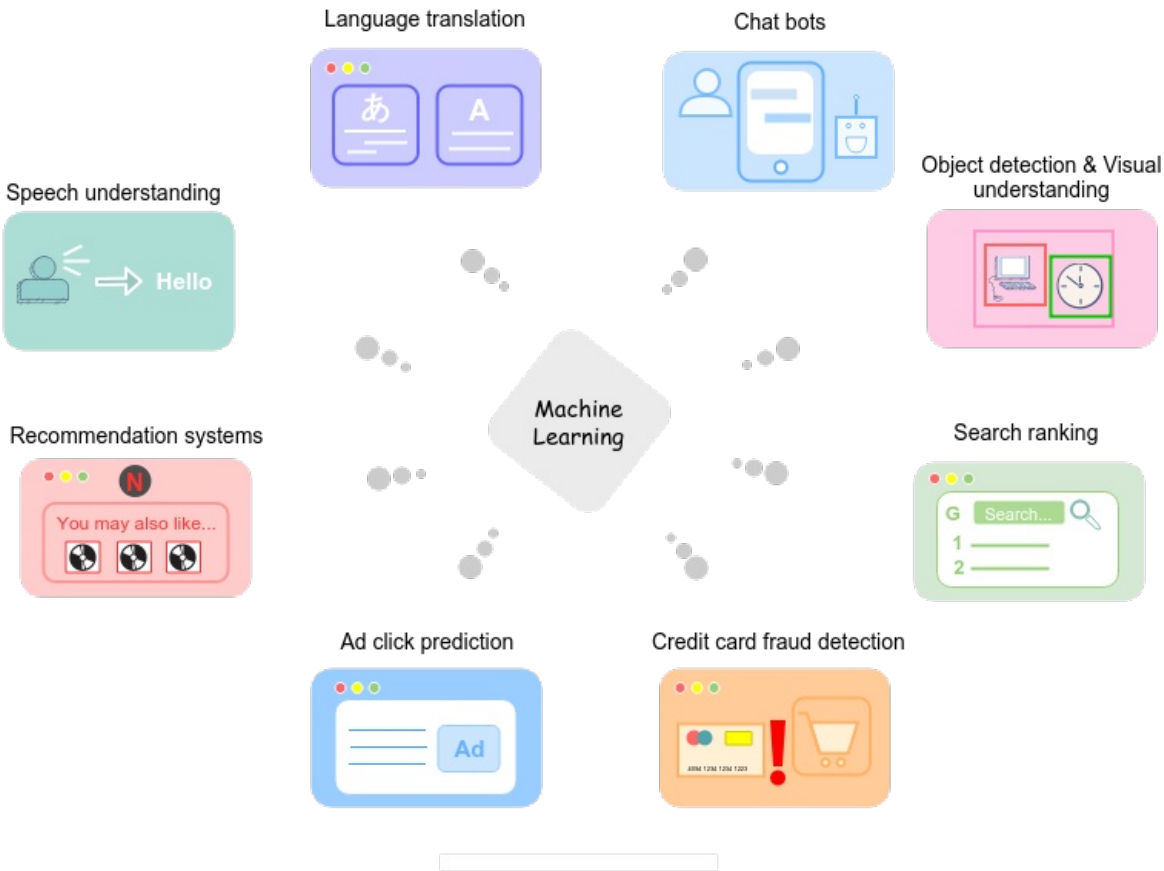
How Does This Course Help in ML Interviews?

Learn how this course will prepare you for the machine learning system design interview at any technology giant.

We'll cover the following

The rise of machine learning

Machine learning (ML) has been one of the fastest-growing fields, and it is projected to grow from $7.3B in 2020 to $30.6B in 2024. Machine learning aims at solving a multitude of complex problems and has seen rapid progress in several areas such as speech understanding, visual understanding, search ranking, credit card fraud detection, and so on.

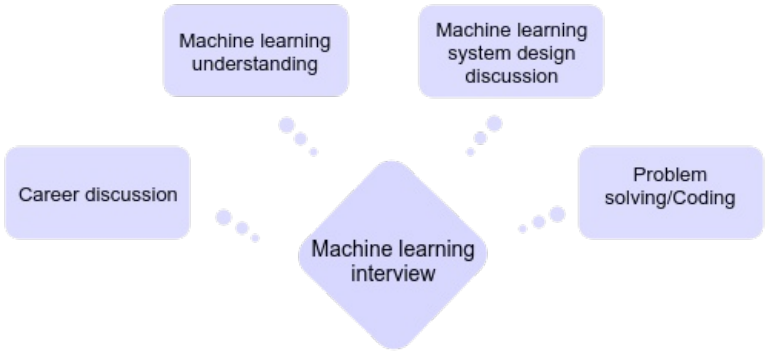


A subset of areas where ML has made significant advancements

As a result of these major developments, machine learning usage and jobs have grown massively in the last few years and are expected to grow (https://www.forbes.com/sites/louiscolumbus/2020/01/19/roundup-of-machine-learning-forecasts-and-market-estimates-2020) even faster in the upcoming years.

What to expect in a machine learning interview?

Companies hiring for machine learning roles conduct interviews to assess individual abilities in various areas. You can expect the following topics to be covered in these interviews:



What to expect in a machine learning interview?

Problem-solving/coding

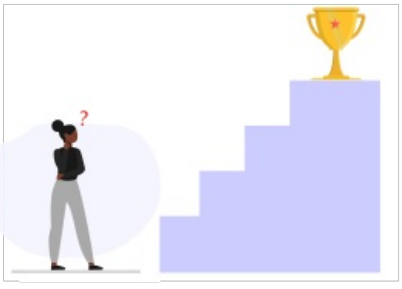
This portion of the interview is fairly similar to other software engineering coding interviews where the interviewer gives a coding problem, such as perform an 'In-order tree traversal', and the candidate is expected to solve that in about half an hour. There is ample content available on how to best prepare for such questions.

Machine learning understanding

This area generally focuses on individual understanding of basic ML concepts such as supervised vs. unsupervised learning, reinforcement learning, classification vs. regression, deep learning, optimization functions, and the learning process of various ML algorithms. There are many courses and books that go over these fundamental concepts. They facilitate the learning of ML basics and help candidates prepare for the interview.

Career Discussion

Career discussion tends to focus on an individual's resume (previous projects) and behavioral aspects, such as the ability to work in teams (conflict resolution) and career motivation. Understanding the path you want to take in your career and having the ability to discuss previous experiences and projects is required for this portion.

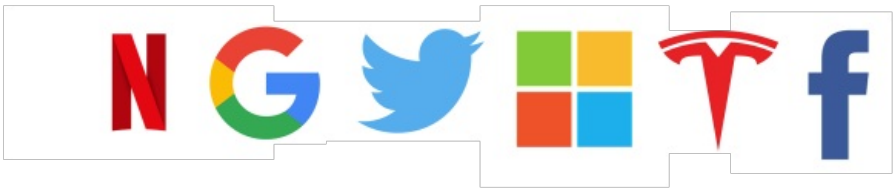


Machine learning system design discussion

This discussion focuses on the interviewee's ability to solve an end-to-end machine learning problem and consists of open-ended questions. This is an integral part of the interview, and not much helping material is available for it. Hence, this course helps in developing the thought pattern required to approach ML system design questions.

Machine learning system design interviews

ML system design interview questions are vital in assessing the interviewee's performance for machine learning jobs. While there are numerous courses and books available on different ML concepts and techniques, very few consider approaching the ML problem from a system design perspective, and even fewer focus on how to prepare for such an interview. This course intends to cover this gap and goes over the most popular machine learning problems solved by top tech giants like Google, Netflix, Twitter, Microsoft, Tesla, and Facebook.

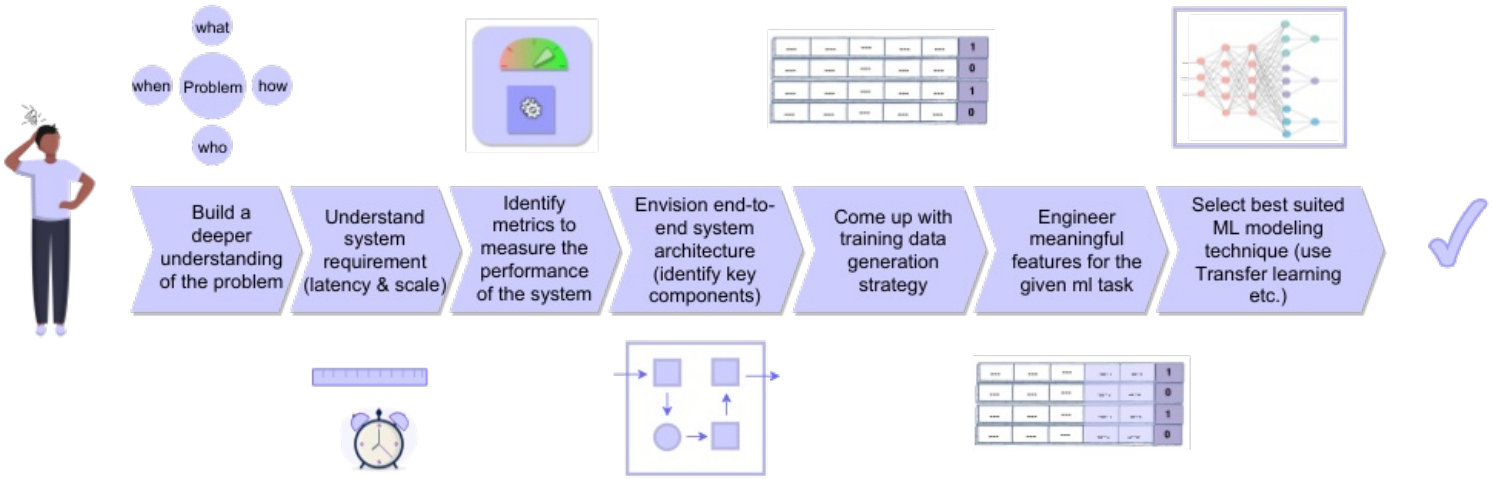


Prepare yourself for the ML system design interview of tech giants

In the ML system design interview portion, candidates are given open-ended machine learning problems and are expected to build an end-to-end machine learning system to solve that problem. Few of such problems could be:

- Build a *recommendation system* that shows relevant products to users.
- Build a *visual understanding system* for a self-driving car.
- Build a *search-ranking system*.

In order to answer such questions, the candidates should consider the following approach.



How a candidate should approach machine learning system design questions

This approach is further detailed in the next lesson (https://www.educative.io/collection/page/10370001/6237869033127936/4866366655954944) in the form of a guideline. We will use this guideline to come up with end-to-end solutions for the machine learning system

design problems.

> In the practical ML techniques chapter, we will also go over some key practical methods and techniques that are helpful in designing machine learning systems. These methods and techniques include important performance and capacity considerations, embeddings, online experimentation, model debugging and testing etc.

We hope that this course will give you key insights on designing an end-to-end machine learning system and as a result, equip you with the right tools to solve any machine learning design problem. Happy learning and best of luck with your interview preparation!

Next →

Setting up a Machine Learning System

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