

User Manuals

Introduction about applying Feynman technique

Step One: Choose Your Concept

The first step is to choose the concept you want to understand. Take a blank piece of paper and write the name of that concept at the top of the page.

Step Two: Pretend You're Teaching the Idea to a New Student

The second step is to write out an explanation, as if you were teaching it to someone who didn't understand the subject. This is crucial because in explaining to yourself the ideas you already understand, as well as the ones you don't, you gain a better understanding and pinpoint exactly the details you don't understand.

Step Three: Whenever You Get Stuck, Go Back to the Book

Whenever you get stuck, go back to the reference materials, lectures or a teacher assistant and re-read or re-learn the material until you do get it enough that you can explain it on the paper.

Step Four: Simplify and Create Analogies

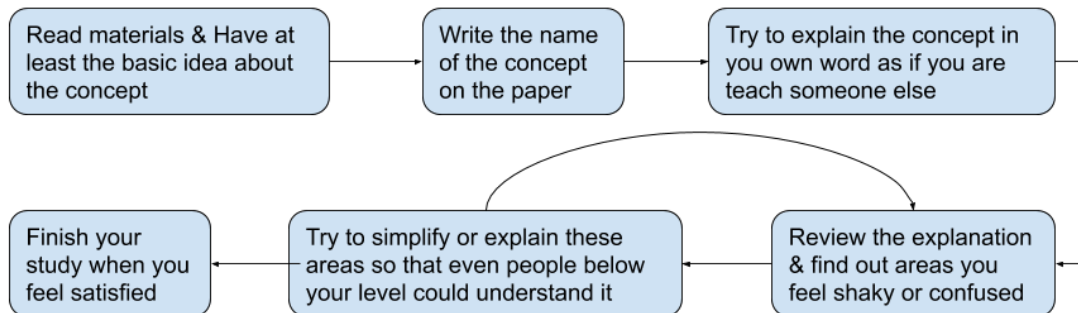
Wherever you create a wordy or confusing explanation, try to either simplify the language, or create an analogy to understand it better.

You'll notice I did both of these in this quick demonstration. I simplified the language of torque, to explain it in terms of twisting. Second, I was able to describe it through analogy, by taking the torque vector and describing it as a corkscrew motion, tightening with right or loosening with left.

Keys when implementing the Feynman technique

1. Please **write down** your explanation.
2. Please explain it as if you are explaining to a **beginner** who barely knows nothing of the concept
3. Please try to explain the concept in **simple** words

4. Please try to **simplify** your explanation as much as you can



*Notice:
You can revise the material anytime during the process

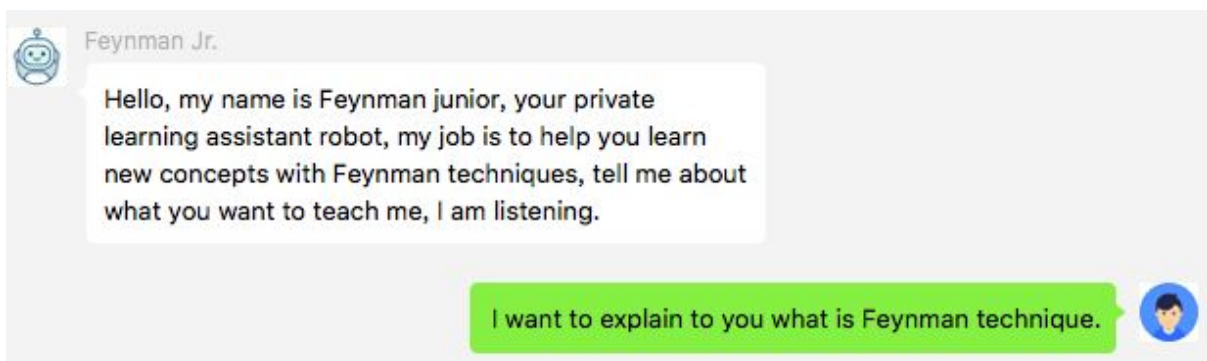
Introduction to our robot

Turing

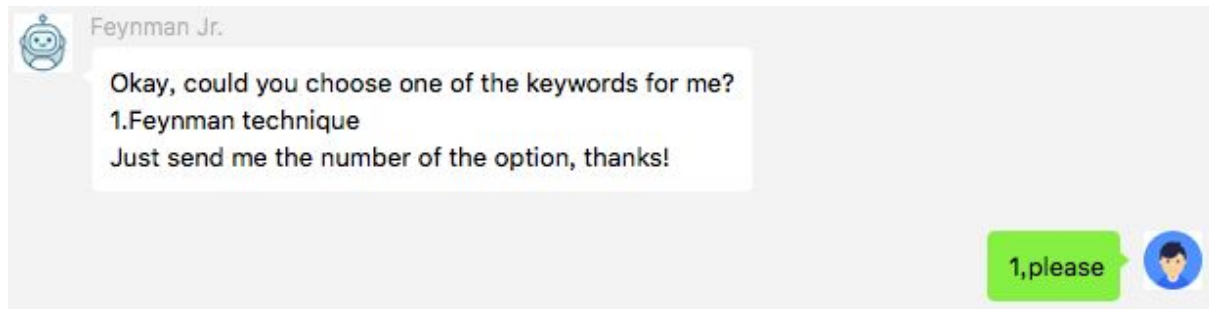
Imagine that our bot is a new student who does not know much about what you are going to teach him. Firstly, the users will try to explain a concept using their own words, and the bot will keep questioning the complex terms that it does not understand well, push the users to modify their explanation by suggesting them to use simpler terms, as well as challenge them to use one example to reinforce their understanding.

How to use it?

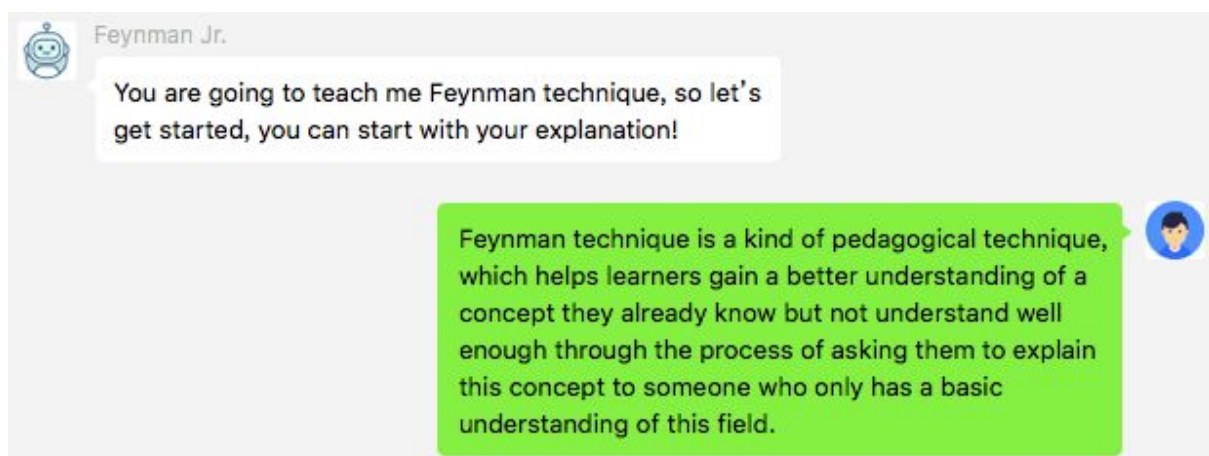
1. The bot will greet in the beginning and ask you the subject that you want to teach. And you need to respond the subject you want to teach.



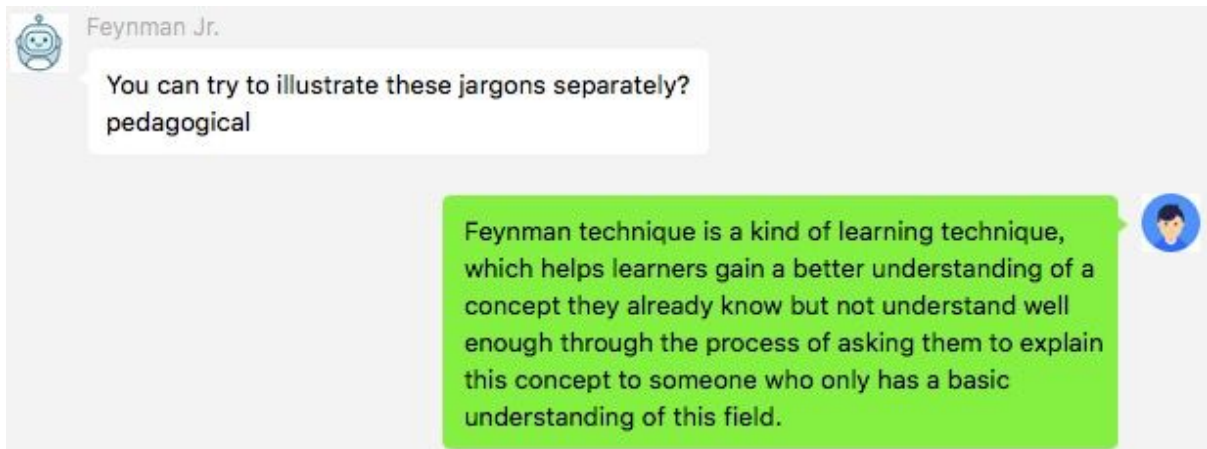
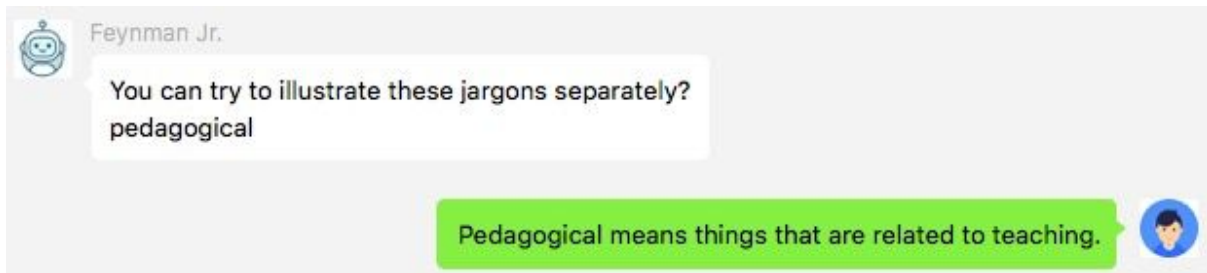
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2. The bot will continue to question the keywords with you, you just need to give it the number of your option.



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3. The bot will confirm the keyword with you and ask you to start your explanation. You should input your explanation.



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4. The bot will suggest that you should try to illustrate the jargons of your explanation. You can either choose to illustrate the jargons or try to rephrase your explanation.



5. Once your explanation achieves a good level. The bot will ask for an example to reinforce your understanding. And the bot will use the same jargons detection technique to push you to improve your example.

Reference

1. Never Forget an Idea Again with The Feynman Technique, Retrieved from https://www.scotthyoung.com/learnonsteroids/grab/TranscriptFeynman.pdf?fbclid=IwAR1Zx1XtOnhrZc8R9UG3-Xau-BRpFtk7UMCZeh-3yjuZCpi1GL_CdjCGkW0

Materials

1. Learning la mise-en-scène

1) Designing the World of Film: Crash Course Film Production #9

<https://www.youtube.com/watch?v=Q3BcS8UwI9U&app=desktop>

2) <https://en.wikipedia.org/wiki/Mise-en-sc%C3%A8ne>

2. ROC curve

1) Classification: ROC Curve and AUC

<https://developers.google.com/machine-learning/crash-course/classification/roc-and-auc>

2) What is a ROC Curve and How to Interpret It

<https://www.displayr.com/what-is-a-roc-curve-how-to-interpret-it/>

<https://www.youtube.com/watch?v=4jRBRDbJemM>

3. Atmospheric circulation

1) Atmospheric circulation

<https://content.meteoblue.com/ro/meteoscool/large-scale-weather/atmospheric-circulation>

2) Global Atmospheric Circulation

<https://www.youtube.com/watch?v=Ye45DGkqUkE>

Reference

1. CrashCourse, Designing the World of Film: Crash Course Film Production #9. 26 oct. 2017

2. Classification: ROC Curve and AUC. Retrieved from
<https://developers.google.com/machine-learning/crash-course/classification/roc-and-auc>

3. Carmen Chan, What is a ROC Curve and How to Interpret It, Retrieved from
<https://www.displayr.com/what-is-a-roc-curve-how-to-interpret-it/>

4. Atmospheric circulation, Retrieved from
<https://content.meteoblue.com/ro/meteoscool/large-scale-weather/atmospheric-circulation>

5. Keith Meldahl, Global Atmospheric Circulation. 17 déc. 2011.