

Top 15 AI project ideas for beginners

1. **Face Recognition** – There is much research going on today in this area. Some apps recognize a face with nearly 100% accuracy. As a beginner in AI, you can try to do this project either on your desktop computer or as an app on the cell phone. Face recognition uses advanced mathematical functions and algorithms. It can be used as a password to open a laptop or cell phone. It uses advanced 3D recognition and image processing to do this. In today's world, Face recognition is being used in many apps as a password instead of a text-based password. This is one project that will excite the beginners to try it out.
2. **Self-driving automobile** – The companies like Tesla and Google have been in this market for quite a time. However, even though there has been a high advancement in this area. AI is used to power the vehicle in tough traffic and tough road conditions. This project can be considered where advanced AI simulation software and advanced algorithms are needed to detect the vehicles on all sides, the road conditions management, the speed management, the braking system, collision avoidance through complex mathematical and image recognition systems. This project can be taken by individuals who are AI enthusiasts in colleges or newly out of colleges.
3. **Taxi transportation** – Here the taxi company such as Uber, Ola can use AI to figure out the shortest route using maps, wait time for the customers, traffic congestion, customer concentration, type of services such as where exactly the taxis are currently moving, estimate the prices and customer experience. This can be a good project to do, as this software has a lot of advantages to the transportation department. It is predicted that transportation by car and other heavy vehicles will use AI to a large extent and make the customer experience highly predictive and have a highly satisfying experience for the customers.
4. **Amazon Retail shop** – This is tracking, analyzing huge and complex data from various data sources to manage and predict customer habits, customer shopping preferences, cost-effective products, manage vendors, manage delivery, forecast the revenue, provide

discounts, predict customer's future shopping, etc. Again AI is used for all these features by Amazon which is a retail company having presence all over the world. This is a very good AI project for the beginners to try it out. Statistics, Probability, Calculus, Matrices, and Vectors are used increasingly in AI. Big Data analysis using AI is one such trend in the market in 2020 and beyond.

5. **Email Segregation such as spam and phishing filters** – One of the latest trends in the cyber security market is email segregation using the AI for detecting, tracking, and analyzing the keywords in the emails to filter the emails for spam and phishing emails. The spam emails are dangerous because if they are not controlled, it occupies the space, delivers the malicious payload, and can cause security vulnerabilities. Similarly, the spear-phishing or the targeted phishing emails are malicious and can collect personal information about an individual for malicious intents such as stealing the data or stealing the money from the bank accounts, etc.
6. **Google Search Engine** – One of the exciting projects is to build a search engine similar to Google or Bing search engines which scans billions of web content for the exact match of the search sentences or keywords and shows you the relevant images, data, text and other documents. Google has kept its search algorithms secret, but you can make search engines if you know different algorithms such as genetic algorithms, the shortest route first, etc. You also need to know a little bit about networks and how the data passes on the internet from one place to another. Search Engine Optimization is one specialized field that makes the websites and its content relevant with the help of Meta keywords inserted in the web contents so that the most relevant pages can be tracked and shown first.
7. **Personal Assistants and Chat Bots** – There is a lot of AI-powered personal assistance in the market today such as Siri, Cortana, Alexa, Bixby, and Google assistance which can help the customers with the answers to their query. These AI-powered chat bots are self-learning apps and can recognize the speech, text, and scan billions of data to answer your

queries in nearly the way we humans do. They use speech recognition, NLP, and text or character recognition features along with other AI algorithms to answer your queries. This can be a good project to start with if you are new to AI. The AI assistance needs to be trained first with examples and once this is done they record the inputs, do the processing, and output the desired results.

8. **Advertising and Product suggestions** – AI in digital marketing, advertising, and product suggestions is one thing that uses AI in a completely different way. 2020 is the world of targeted advertising online. This means when you visit a website and look for some items to purchase, the algorithm scans millions of ads and can recommend the most relevant ads that you are looking for. Thus AI in marketing and advertising is a big digital market today. Even organizations giants such as Google and Amazon rely on ads to market their products. Amazon uses AI increasingly for providing product suggestions when any user or individual browse the Amazon website and that too even without logging in.
9. **Banking and Finance Industry** – Every day in any large bank millions of transactions take place. AI is used to detect the fraud if it is going to be committed or already the fraud has taken place. This is done by the automated software powered by AI, having search engine kind of automation software. These tasks along with other email and phone services are automated. When you call the bank most likely you will first contact the chat bots which recognize your queries and answer you, of course, you are then directed to the human if the chat bots cannot answer.
10. **Surveillances** – The surveillance systems rely to AI-powered software to recognize the face by image recognition software from a lot of video data that the camera surveillance software provides. These systems are used in almost every company for monitoring their perimeters and their offshore/onshore development center's security.

11. **Essay graders and Plagiarism Analyzers** – Essay graders are powered by AI can help teachers to grade the essays of the number of students in very less time. This helps teachers of strenuous manual tasks of looking at each student's essay. Another significant development in AI is the plagiarism analyzers are powered by AI can scan billions of online contents to analyze whether the author has duplicated the text, and can give you the results. This is still in the developing stage as most of the plagiarism analyzers today are not powered by AI.
12. **Games** – Many online games and gaming software can be powered by AI so that it learns first from the opponent and masters the gaming skills. If you remember the supercomputer deep blue defeated Gary Kasparov in the game of chess over a 2 decade back. Thus AI-powered games are simulating software that is used to master the games for which it is programmed. This can be a good project for beginners in the year 2020 and beyond. Online gaming is a lucrative industry in today's world of COVID 19 as well.
13. **Internet of Things at Home** – One of the largest industries after self-driving vehicles is the IoT at home which makes virtually every gadget at home and makes home automation easier and you can switch on and off, leave instructions to record programs on TV, washing machines, toaster and refrigerator and so on.
14. **Social Networking** – Social Networking is at its peak in today's world. Facebook which is a social networking website can identify faces with the help of AI face recognition software and suggest recommendations to tag the photos which you have uploaded.
15. **Spotify** – This is not only a music app but with the help of AI it can learn from you which music types are preferred by you and recommend you the correct music choice from the list of thousands of music. This type of AI software can be tried by the beginners of AI in 2020.