

Workshop on Data Science

Learn Creating Custom ChatGPT with
Scraping Data from Google Review and
Real-Time Object Detection on YOLO



MENTOR

Work Experience



Personal Profile



Achievements



Mentorship Experience



Education



INDIAN INSTITUTE OF
MANAGEMENT LUCKNOW

upGrad
INSOFE
INSPIRE • EDUCATE • TRANSFORM

Other Contributions



stack
overflow

Contact Info



Mentorship Experience



Reviews and Recommendations

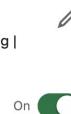


Satheesh Kumar · 1st

Senior Data Architect @ Collabera | Cloud | AWS | Azure | Data Analyst | SQL | Big Data | Streaming | Spark | Hive | NoSQL | Kafka | Scala | Speaker | Blogger

April 17, 2020, Satheesh worked with Mohamed Noordeen but they were at different companies

All LinkedIn members



Noorudeen is a god-gifted instructor. He has many years of experience in data science, knows a variety of creative methods, and ensures what you need to learn. His calming personality makes you feel completely comfortable, even when you are making mistakes. He is always encouraging and positive. He is the best data science instructor I have ever met from a dozen of instructors over the years with different geographies.

Sometimes, he pushes people to drive the path to achieve desire results. The way he handles shows the quality of managing people in unique and convinced way.

I have come across many profiles in data science industry and got a chance to interact with them globally. Without doubt, Noorudeen is one of the biggest South Indian profile with lots of talent, continuous technology updating, also helping people personally during emergency period.

I can proudly say Noor is the best in technology, humanity, and cares for a person to involve in subject. None of them have all these 3 qualities in the market. He is man who jumped directly from heaven to earth.

If you want to improve your data science innovation and make quality decision to reach higher business results quickly, He is the right person to approach. You shall see the magic. He is not only focusing on technology to achieve the results but also drives how solution suits and help people in business.

I am sure and wish him, will reach greater heights in future days.



rajguru ramalingam · 1st

Data Scientist

August 30, 2022, Mohamed Noordeen was senior to rajguru but didn't manage rajguru directly

All LinkedIn members



"Noordeen - The Best Mentor"

Noordeen is an expert in solving Business problems using Data Science skills. He is also one of the greatest Mentor/Trainer in his expertise area. I was mentored by him in Data science, using which i got multiple offers. His way of teaching involves easy understanding using examples, layman language and best practices. Also like his thinking on continuous learning and updating himself with recent technologies.

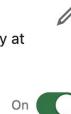


Sridhar Pappu · 1st

President: uGDX Institute of Technology (Formerly INSOFE) | Professor at uGDXIT | Adjunct Faculty at Case Western Reserve University

May 18, 2017, Sridhar was Mohamed Noordeen's teacher

All LinkedIn members



Mohamed Noordeen has all the right qualities to do well personally and professionally. His dedication to learning Data Science is amply visible from the fact that he traveled every weekend from Chennai to Bengaluru for a duration of nearly 6 months to do our rigorous certificate program. In a class of nearly 60 professionals, he did very well and even secured a scholarship that only a few in the class get. Even after getting the scholarship, he approached our Data Scientists to learn what mistakes he had made.

In addition to grasping well the concepts of various Statistical, Machine Learning and Big Data techniques, he has displayed excellent coding skills as well. His approach to a problem is also very systematic and meticulous.

In addition, he is a very polite and soft-spoken person and will gel well in any team. I am sure Mohamed Noordeen will be an asset to any Data Science team, or any team, in general.



L S Kiran CH · 1st

Engineering Lead | Data Solution Architect | Big Data Engineer | Enterprise Data Integrations | DevOps-Cl/CD | Technology Consulting | Palantir Foundry | Cloud - AWS

December 21, 2022, L S Kiran worked with Mohamed Noordeen but they were at different companies

I got opportunity to learn Data Science from Noorudeen. He helped to me become advanced level in ML, DL, NLP and related ecosystem components. Starting with solving simple problem statement to complex one by doing the Hackathons in public forums like Analytics Vidhya and Kaggle and while see our rank in those portals, we got confidence which further encouraged me to do much more.

Tons of Thanks to Noorudeen for such dedication in educating us and make us a professionals in the field of Data science.

I can say that, It is almost impossible to get this type of learnings anywhere else due his unique nature of instructiveness while teaching along with doubt clearing then and there during session and I almost felt that we are actually in physical class room than virtual live session.

Truly speaking, When we have great knowledge, there are many ways to earn money, but Noorudeen chosen the field of education to enhance many people's lives with career growth. This motive is really great and very kind gesture towards the society we are in. Thanks a lot and keep doing.





muthu kumaran

1 review · 1 photo

★★★★★ 3 months ago

I was referred to Inceptez by one of my friends and was a little skeptical to join because I had only knowledge of SQL and Informatica support activities.

I had not worked as a developer in my career.

But after joining the AI/ML course in Inceptez, I was handed over to two of the best mentors(Imran and Noor).

Imran and Noor taught us all the python concepts, stats and ML algorithms ,DL, NLP related projects.

They never were in a hurry to complete a specific topic and move ahead.

They had their roadmap and perfectly followed that without any delay.

All doubts were cleared before moving on to the next session.

Assignments and coding problems were given on regular basis to enhance our coding skills and to increase understanding of the ML concepts in depth.

Whatever contents were promised before joining the course were completed and even some advanced concepts which are not in the curriculum were taught to us.

@Noor Inceptez You have been a great mentor and tutor for me personally , really motivated to get a move on into this exciting domain of **datascience** and I really hope god shower you with good health and more success. Thank you for believing in us.



Iskiranch3 ch

1 review

★★★★★ 3 months ago

Data Science course is my 3rd Course at Inceptez. I learnt Big data and Dev Ops here which uplifted my career 5x faster than usual. With **Data Science** knowledge addition looking forward to step-up up my career further level. Last year, I have feeling that I am out of track with the respect to AI and ML area before learning, But Noordeen made me from novice to advanced level in ML, DL, NLP and related ecosystem components. Starting with solving simple problem statement to complex one by doing the Hackathons in public forums like Analytics Vidhya and Kaggle and while see our rank in those portals, we got confidence which further encouraged me to do much more.

Tons of Thanks to Inceptez and Noordeen for such dedication in educating us and make us a professional engineers in the field of **Data science**.

I can say that, It is almost impossible to get this type of course anywhere else due it's unique features like interactive Live session from industry export like Noor along with doubt Noordeen then and there during class and we almost felt that we are actually in physical class room than virtual live session.

Truly speaking, when we have great knowledge, there are many way to earn money, but Inceptez and



Kavitha Seenivasan

1 review

★★★★★ a year ago

Positive: Professionalism, Quality, Value

Good place to take **Data science**. Noordeen sir is the good trainer and mentor, who teaches all basic to advance concepts in Machine learning, deep learning and NLP. Calmly clears all our doubts with no hesitation and repeat the explanation in different angle for the hard to understand topics. Gave us motivation and support for all the time. Thanks to Basith for support and encouragement.



Rajkumar Rajendran

1 review

★★★★★ a year ago

Positive: Communication, Professionalism, Quality, Value

Best place to learn **Data Science** is Inceptez Technologies.

Noor is a great teacher ,mentor & motivator, he has very depth knowledge in ML, DL & NLP and the way he makes us understand the concepts are awesome.

Thanks to Basith for providing the necessary support. I would recommend Inceptez to all those who aspire to learn **Data Science**.



mohamed suhaib

1 review

★★★★★ a year ago

Positive: Communication, Professionalism, Quality, Value

I have take up **Data Science** course in Inceptez, my instructor is Noordeen. He has lot of experience in **data science** platforms like Machine Learning, Deep Learning, NLP, Python and statistics. He taught us almost all the algorithms and preprocessing and feature engineering techniques using in ML and DL and NLP using in today's market and provided lot of practical and coding examples using real time Kaggle dataset and helped us to understanding the algorithms in better and easy way.



Divya Narayana

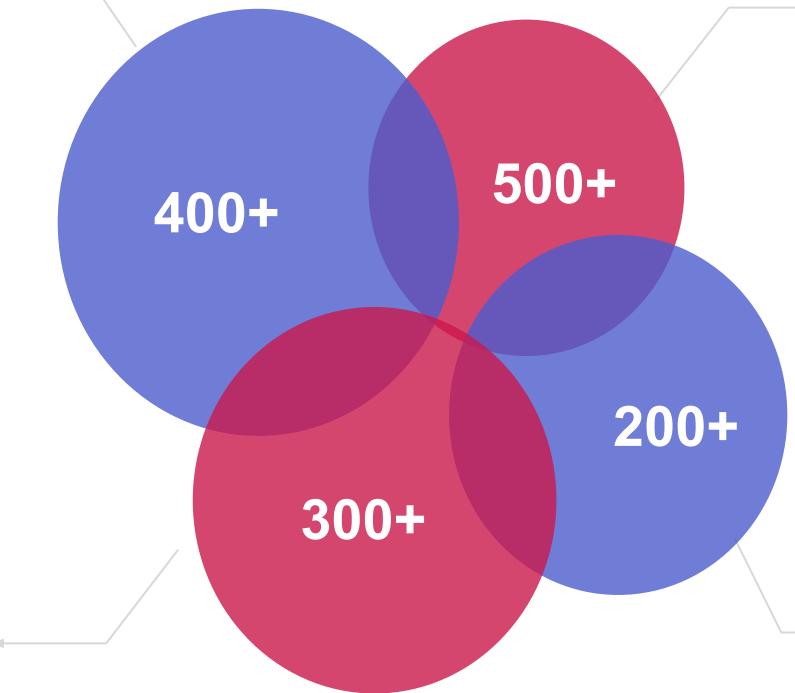
1 review

★★★★★ 3 months ago

It's a great place to learn the **Data Science** course here. I came to know about Inceptez through my brother who completed the Big Data course successfully and now he's a successful Data Engineer in a reputed company. I love learning here. They are explaining every concept in detail. I highly recommend aspirants to do the courses here. Thanks to Noor

Mentored above 2000+ Data Science Aspirants

Offline Course
(7 Batches)



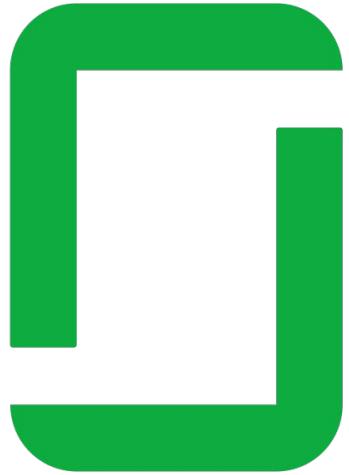
Workshop
(10+ Batches)

Online Course
(6 Batches)

6

Corporate and
College Training
(3 Organisations
and 2 Colleges)





glassdoor



25 Best Jobs in America (2016)

Best Jobs ▾ 2016 ▾ United States ▾

Share |    

Job Title	Median Base Salary	Career Opportunity	Job Openings	
#1 Data Scientist	\$116,840	4.1/5	1,736	View Jobs
#2 Tax Manager	\$108,000	3.9/5	1,574	View Jobs
#3 Solutions Architect	\$119,500	3.5/5	2,906	View Jobs



25 Best Jobs in America (2017)

Best Jobs ▾

2017 ▾

United States ▾

Share



Job Title	Median Base Salary	Job Satisfaction	Job Openings	
#1 Data Scientist	\$110,000	4.4/5	4,184	View Jobs
#2 DevOps Engineer	\$110,000	4.2/5	2,725	View Jobs
#3 Data Engineer	\$106,000	4.3/5	2,599	View Jobs



25 Best Jobs in America (2018)

Best Jobs ▾ 2018 ▾ United States ▾

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Job Title	Median Base Salary	Job Satisfaction	Job Openings	
#1 Data Scientist	\$110,000	4.2/5	4,524	View Jobs
#2 DevOps Engineer	\$105,000	4.0/5	3,369	View Jobs
#3 Marketing Manager	\$85,000	4.0/5	6,439	View Jobs



25 Best Jobs in America (2019)

Best Jobs ▾ 2019 ▾ United States ▾

Share



Job Title	Median Base Salary	Job Satisfaction	Job Openings	
#1 Data Scientist	\$108,000	4.3/5	6,510	View Jobs
#2 Nursing Manager	\$83,000	4/5	13,931	View Jobs
#3 Marketing Manager	\$82,000	4.2/5	7,395	View Jobs

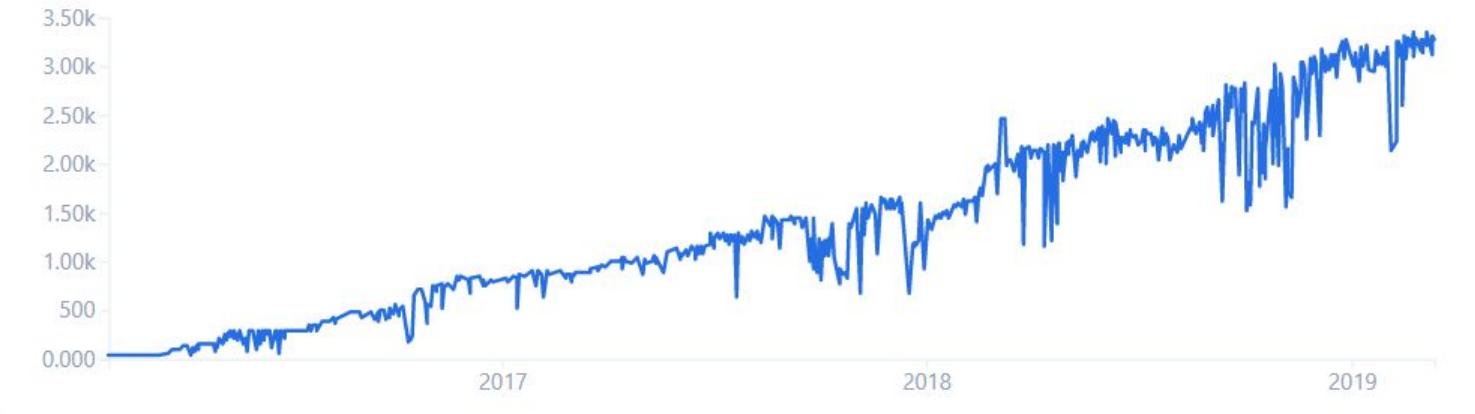


https://www.glassdoor.com/List/Best-Jobs-in-America-LST_KQ0,20.htm



High Demand of Data Scientist

Data Scientist job openings at the world's top companies



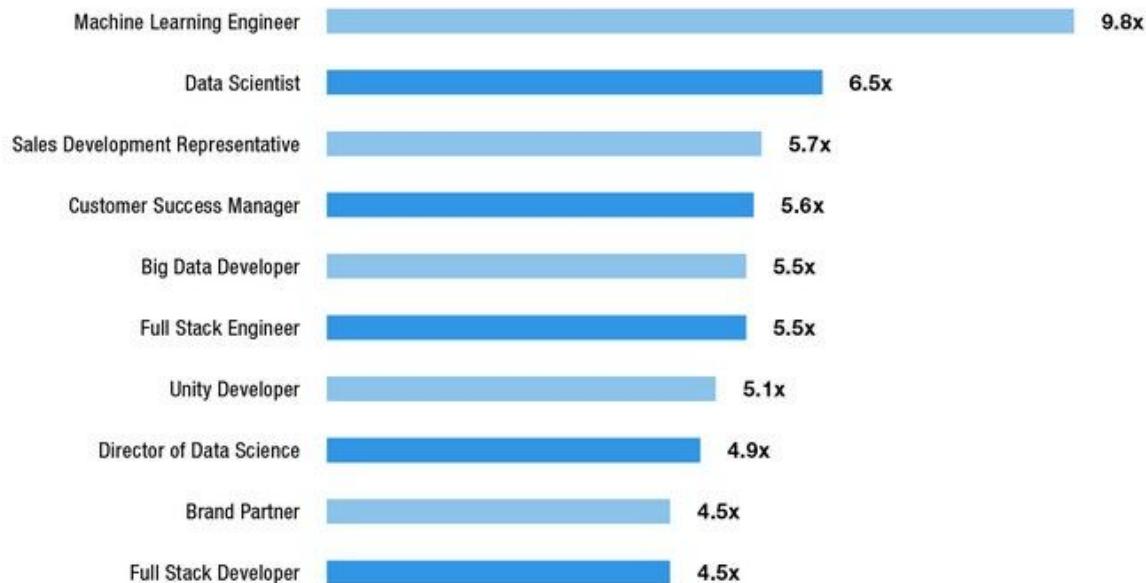
Data from Thinknum - [Open dataset](#)

● Title (Count)



Low Supply of Data Scientist

1. The world needs **28%** more data scientists worldwide by **2020** to meet growing demand
2. There's a shortage of **151,717** data scientists in the U.S. alone.
3. **59%** of data science job demand is in Finance, Professional Services, and IT
4. The highest demand for data skills is in the area of **machine learning**.



WHY THE DEMAND IS HIGH?



DATA SCIENCE DOMAINS

FINANCE

Asset pricing, trading strategies and more

HEALTHCARE

Epidemiology, Insurance, Image recognition

PHARMACEUTICALS

Patient Journey, Treatment Pathways

GOVERNMENT

Climate Change, Public Policy, Security

MANUFACTURING

Supply Chain, Equipment maintenance and others

RETAIL

Pricing, Discounts, Market Basket Analysis

OIL & GAS

Drilling, Sensors, Equipment Maintenance

TRANSPORTATION

Airline Promotions, Passenger promotions

UTILITIES

Smart Meter Grids, Power consumption

WEB INDUSTRY

Clickthrough Ads, Marketing

INTERNET SECURITY

Log monitoring, Alerts, Detecting intrusions

SPACE & SCIENCE

High Energy Physics, R&D and much more



<https://www.indiatoday.in/education-jobs-and-careers/story/career-outlook-for-data-scientists-in-india-sky-high-pay-and-rising-demand-1825991-2021-07-09>

<https://hr.economictimes.indiatimes.com/news/industry/11-5-million-data-science-jobs-will-be-created-globally-by-2026-report/87800256>

<https://towardsdatascience.com/is-data-science-still-a-rising-career-in-2021-722281f7074c#:~:text=Per%20LinkedIn%2C%20there%20has%20been,in%202020%20at%20around%206500.>

<https://data-flair.training/blogs/data-science-job-trends/>

My Theory

ERA 1



ERA 2



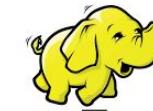
Google Analytics



+a



ERA 3



hadoop



Google Cloud

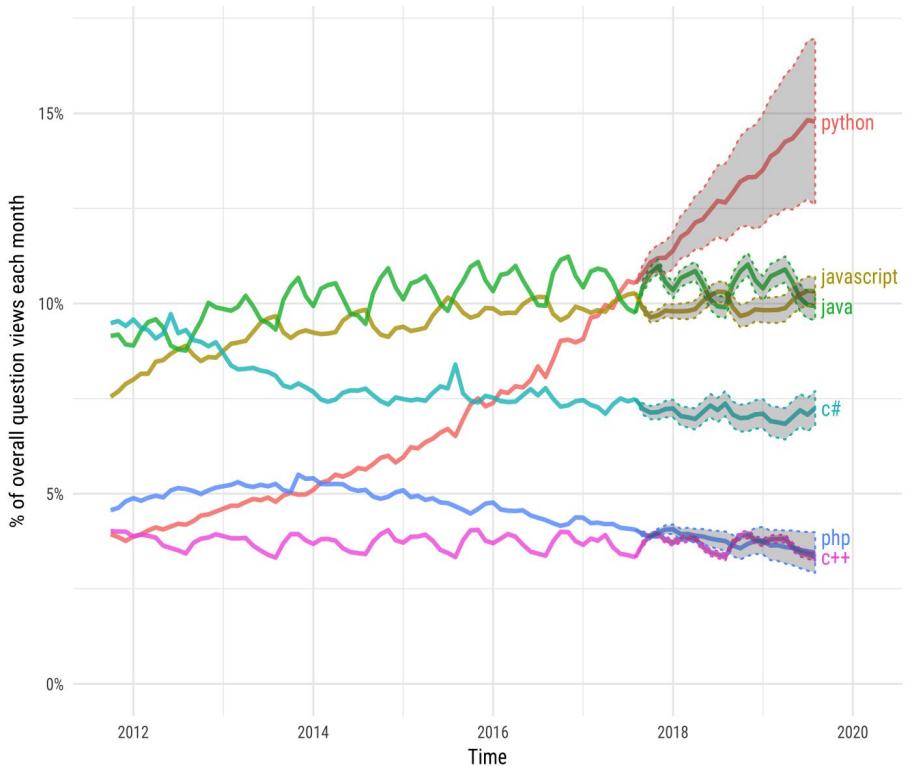
python™



Python's Huge Demand and Popularity

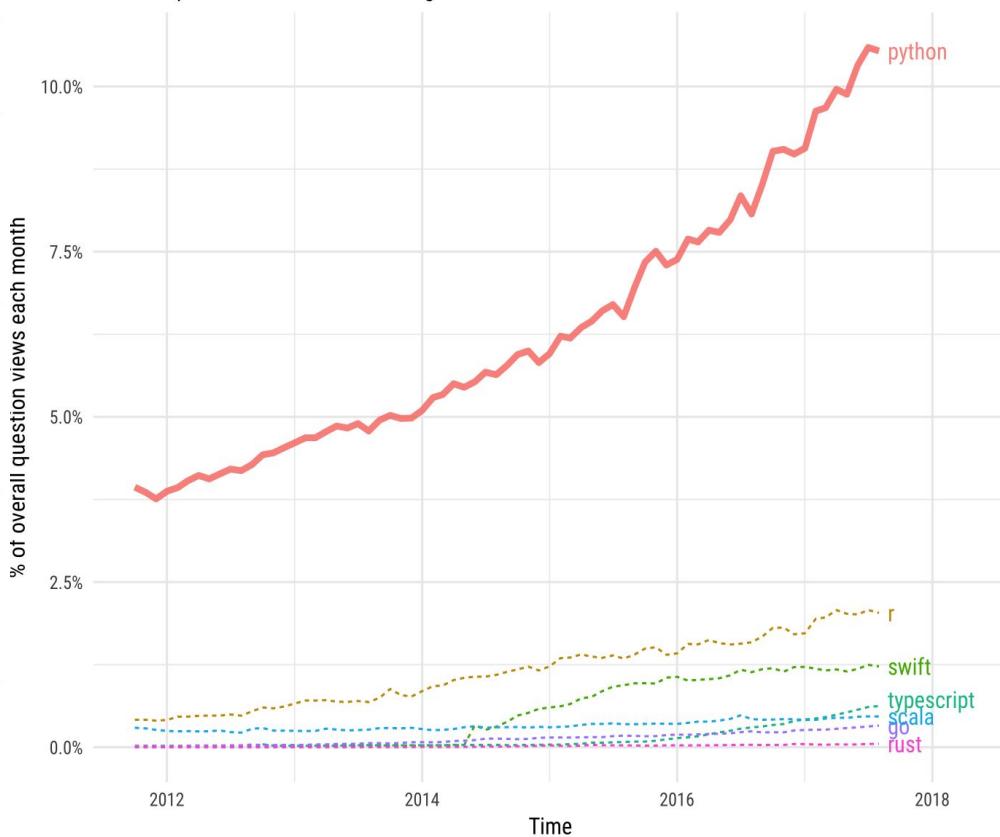
Projections of future traffic for major programming languages

Future traffic is predicted with an STL model, along with an 80% prediction interval.



Python compared to smaller, growing technologies

Based on question traffic in World Bank high-income countries



ARTIFICIAL INTELLIGENCE

Early artificial intelligence
stirs excitement.



1950's

1960's

1970's

1980's

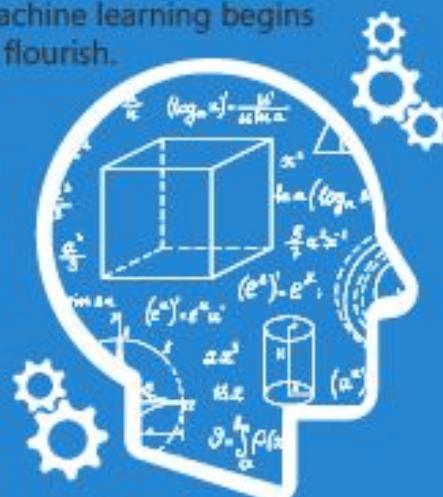
1990's

2000's

2010's

MACHINE LEARNING

Machine learning begins
to flourish.



DEEP LEARNING

Deep learning breakthroughs
drive AI boom.

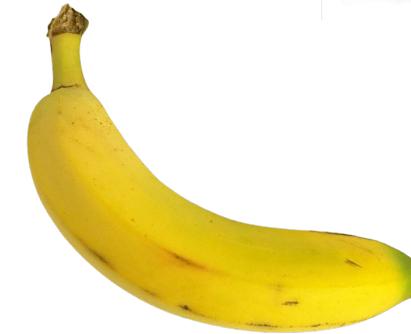
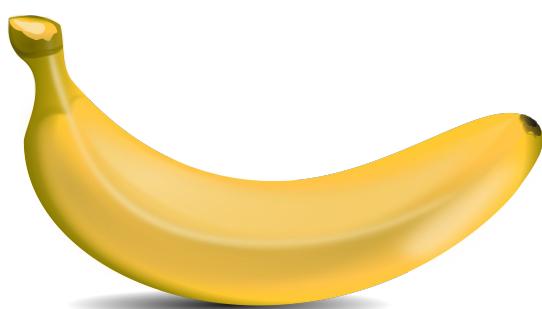


What is Machine Learning?





Baby Learning



?





Machine Learning



?



Traditional Programming Vs Machine Learning



Machine Learning

- **What is Machine Learning?**: Using algorithms to analyze data and make predictions
- **How is Machine Learning used?**: Personalized recommendations, fraud detection, and more



Photo by [Unsplash](#)

Artificial Intelligence

- **What is Artificial Intelligence?**: Machines performing tasks that would normally require human intelligence
- **How is Artificial Intelligence used?**: Virtual assistants, self-driving cars, and more



Photo by [Unsplash](#)

Natural Language Processing

- **What is Natural Language Processing?:**
Teaching machines to understand and analyze human language
- **How is Natural Language Processing used?:** Voice recognition technology, chatbots, and more



Photo by [Unsplash](#)

BERT

- **What is BERT?:** A machine learning algorithm that helps machines understand the context of words and phrases
- **How is BERT used?:** Improving search results and language translation



GPT

- **What is GPT?**: A machine learning algorithm that generates human-like text responses
- **How is GPT used?**: Chatbots, language translation, and more



Photo by [Unsplash](#)

Examples of AI

- **Virtual Assistants:** Siri, Alexa, and Google Assistant
- **Self-Driving Cars:** Tesla, Waymo, and Uber



Photo by [Unsplash](#)

Examples of ML

- **Personalized Recommendations:** Amazon, Netflix, and Spotify
- **Fraud Detection:** Credit card companies and banks



Photo by [Unsplash](#)

Examples of NLP

- **Voice Recognition Technology:** Siri, Alexa, and Google Assistant
- **Chatbots:** Customer service and support



Photo by [Unsplash](#)

How AI, ML, and NLP Work Together

- **AI:** Provides the intelligence and decision-making capabilities
- **ML:** Analyzes data and makes predictions
- **NLP:** Helps machines understand and analyze human language



Photo by [Unsplash](#)

Importance of AI, ML, and NLP

- **Solving Complex Problems:** Healthcare, finance, and more
- **Improving Efficiency:** Manufacturing, transportation, and more



Custom ChatGPT with Scraping Data from Google Review



Understanding Google Reviews

What are Google Reviews?

- Reviews left by customers on Google My Business listings
- Impact search engine rankings and customer perceptions
- Can be used to improve customer engagement and satisfaction



Photo by [Unsplash](#)



Chatbot 101

What is a Chatbot?

- A computer program designed to simulate conversation with human users
- Can be customized to collect data from Google reviews
- Can improve customer engagement and satisfaction



Photo by [Unsplash](#)



Chatbot Design

Key Considerations

- Determine scope of data to be collected
- Design user interface for data collection
- Consider user experience and engagement



Photo by [Unsplash](#)

Data Scraping

The Process

- Extract relevant information from Google reviews
- Store data in a database
- Use data for analysis and insights

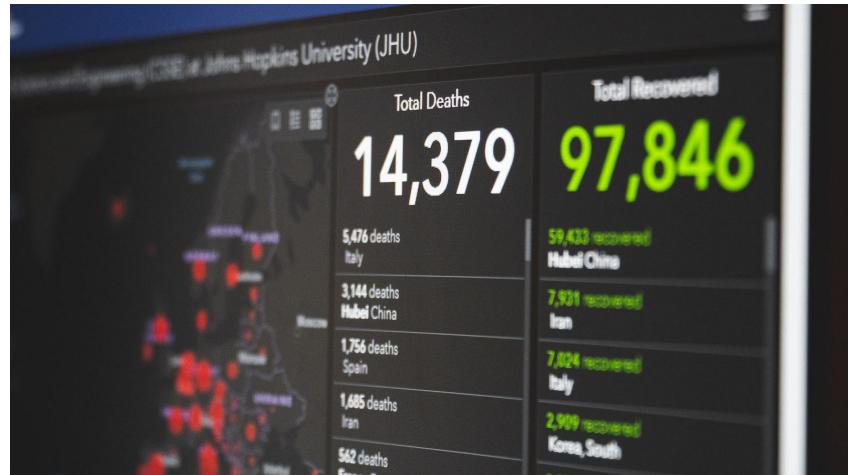


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Natural Language Processing

Extracting Insights

- Use natural language processing to extract insights from customer feedback
- Improve chatbot performance and accuracy
- Identify areas for improvement and optimization



Chatbot Integration

Connecting the Dots

- Integrate chatbot data scraping with other business tools and platforms
- Use data to inform marketing and sales strategies
- Improve customer engagement and satisfaction

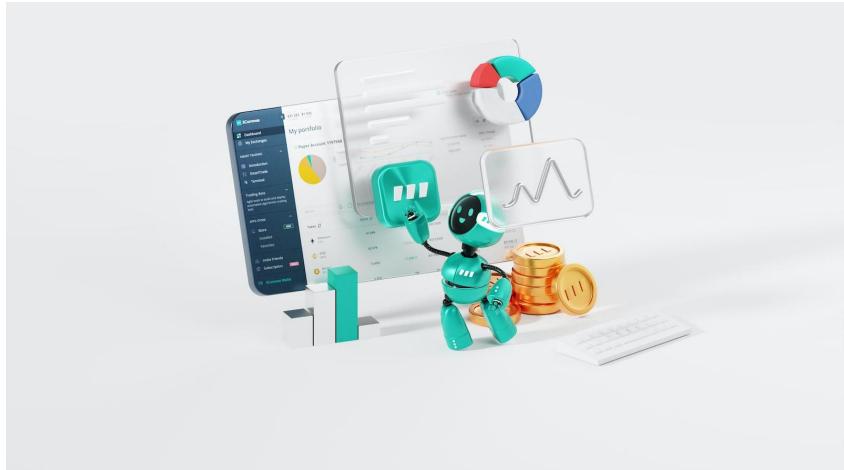


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Case Studies

Real-World Examples

- Present case studies demonstrating successful use of chatbot data scraping
- Highlight key takeaways and lessons learned
- Provide inspiration and guidance for businesses looking to implement this technology



Photo by [Unsplash](#)



Scrap Google
Reviews using
Selenium, Beautiful
Soup

Save the scraped
data in csv and
DB using pandas
and sqlite

Create a LLM
Model for
Database query
using langchain,
openai

Ask to DB chain to
get query for the
language input

Create a summary of
the rows using GPT

Create a review.json
of the summary
columns

Input your question
to get the answer

Create a prompt set
up with all the
necessary parameter

Create a
SimpleGPTVector
Index



Real-Time Object Detection using YOLO

What is Object Detection?

- Object detection is the process of identifying and locating objects within an image or video.
- It differs from object recognition, which only identifies objects without locating them.



Photo by [Unsplash](#)

YOLO

- YOLO (You Only Look Once) is a real-time object detection system.
- It uses a single neural network to detect objects in an image or video.
- YOLO is fast and accurate, making it ideal for real-time applications.



Photo by [Unsplash](#)

How YOLO Works

- YOLO divides an image into a grid of cells.
- Each cell predicts a bounding box and a confidence score for each object.
- The confidence score indicates how likely it is that an object is present in the bounding box.



Photo by [Unsplash](#)

Applications of Object Detection

- Self-driving cars
- Security cameras
- Robotics
- Medical imaging
- Agriculture



Photo by [Unsplash](#)

Real-Life Examples

- Detecting people and cars in a parking lot
- Identifying objects on a conveyor belt
- Monitoring traffic flow on a highway



Photo by [Unsplash](#)

Benefits of Real-Time Object Detection

- Improved safety
- Increased efficiency
- Better decision-making
- Reduced costs



Photo by [Unsplash](#)

Is AI Boon or Ban?

Impact of AI on the Job Market

Types of AI

Machine Learning, Natural Language Processing, and Robotics

- **Machine Learning:** Algorithms that learn from data and improve over time
 - Used in image recognition, speech recognition, and predictive analytics
- **Natural Language Processing:** Algorithms that analyze and understand human language
 - Used in chatbots, virtual assistants, and sentiment analysis
- **Robotics:** Physical machines that can perform tasks autonomously
 - Used in manufacturing, healthcare, and transportation



Photo by [Unsplash](#)

AI and Jobs

Which Jobs are at Risk and Which Industries are Impacted?

- **Jobs at Risk:** Routine and repetitive tasks, such as data entry and assembly line work
 - Transportation, manufacturing, and retail are among the most impacted industries
- **Jobs in Demand:** High-skill and non-routine tasks, such as data analysis and creative work
 - Healthcare, education, and technology are among the most in-demand industries



Photo by [Unsplash](#)

Reskilling

Importance of Reskilling and Upskilling Employees

- **Reskilling:** Learning new skills to adapt to new job roles and technologies
 - Online courses, apprenticeships, and on-the-job training can all be effective reskilling methods
- **Upskilling:** Improving existing skills to stay up-to-date with new technologies and industry trends
 - Continuous learning and professional development are key to upskilling



Photo by [Unsplash](#)

Emerging Jobs

Data Scientists, AI Trainers, and Automation Engineers

- **Data Scientists:** Analyze and interpret complex data sets to inform business decisions
 - Requires skills in statistics, programming, and data visualization
- **AI Trainers:** Teach AI systems to recognize patterns and make accurate predictions
 - Requires skills in machine learning, natural language processing, and data analysis
- **Automation Engineers:** Design and implement automated systems to improve efficiency and productivity
 - Requires skills in robotics, programming, and process optimization



Soft Skills

Creativity, Emotional Intelligence, and Communication

- **Creativity:** The ability to think outside the box and come up with innovative solutions
 - Important for developing new products and services, and improving existing ones
- **Emotional Intelligence:** The ability to understand and manage one's own emotions, and empathize with others
 - Important for building strong relationships with colleagues and clients
- **Communication:** The ability to convey ideas and information clearly and effectively
 - Important for collaborating with others and presenting ideas to stakeholders



Photo by [Unsplash](#)

Future of Work

Remote Work and AI-Powered Collaboration Tools

- **Remote Work:** Working from home or other remote locations, enabled by technology
 - Can improve work-life balance and reduce commuting time and costs
- **AI-Powered Collaboration Tools:** Tools that use AI technology to improve collaboration and productivity
 - Examples include virtual assistants, chatbots, and project management software



Photo by [Unsplash](#)

Industry Case Studies

How Various Industries Have Adapted to AI Technology

- **Healthcare:** AI technology is being used to improve patient outcomes and reduce costs, through applications such as medical imaging and predictive analytics
- **Manufacturing:** AI technology is being used to improve efficiency and productivity, through applications such as predictive maintenance and quality control
- **Retail:** AI technology is being used to improve customer experience and increase sales, through applications such as personalized recommendations and chatbots



CyberKnife

Photo by [Unsplash](#)

Steps to Stay Ahead

Networking, Continuous Learning, and Adaptability

- **Networking:** Building relationships with colleagues, mentors, and industry experts can help individuals stay informed about new job opportunities and industry trends
- **Continuous Learning:** Investing in education and training programs can help individuals develop new skills and stay up-to-date with new technologies and industry trends
- **Adaptability:** Being open to new job roles and technologies, and willing to learn and adapt, can help individuals stay ahead in the job market with AI technology



Photo by [Unsplash](#)

Conclusion

Key Takeaways and Future of AI and
the Job Market