



PITHAPUR RAJAH'S GOVERNMENT COLLEGE (A), KAKINADA
Department of Computer Science



Invited Lecturer by smt. G.Subbha Lakshmi

Lecturer in Computer science, IDEAL College of Arts & Science

On

Data Science.

Date & Time: 2nd December 2023, at 10:30 AM

Venue: Computer Lab-1.

.



PITHAPUR RAJAH'S GOVERNMENT COLLEGE (A), KAKINADA

Department of Computer Science



Invited Lecturer by smt. **G.Subbha Lakshmi** in Computer Science, IDEAL College of Arts & Science, Vidyuthnagar, Kakinada

Circular

01-12-2023

This is to inform all students of the Department of Computer Science that our Department has organized a guest lecture on Data Science in celebration of Computer Literacy Day. The session will be held online on Tuesday, 2nd December 2023, at 10:30 AM in Computer Lab-**1**.

We are honored to welcome **Smt. G. Subbha Lakshmi**, a distinguished lecturer in Computer Science at IDEAL College of Arts & Science, Vidyuthnagar, Kakinada, who will share her expertise and insights on this transformative technology.

All students are strongly encouraged to attend and take full advantage of this opportunity to deepen their understanding of this crucial field in the digital age.

 11/12/2023
Lecturer incharge,

Department of computer science.

Lecturer In-Charge
Dept. of Computer Science
P.R. Govt. College (A)
KAKINADA-533001

P. R. GOVERNMENT (A) COLLEGE, KAKINADA
DEPARTMENT OF COMPUTER SCIENCE

ACTIVITY : Guest Lecture on “Data Science”

GUEST : Asst. Prof. G.Subbha Lakshmi in
Computer Science, IDEAL College of Arts & Science
Vidyuthnagar Kakinada

CONDUCTED BY : Dept. of Computer Science
DATE : 02-12-2023

Photos of the Activity



Guest Lecture on “Data Science” by Asst Prof. Asst. G.Subbha Lakshmi in Computer Science, IDEAL College Kakinada



Principal sir Addressing the Guest Lecture on “Data Science” and Inauguration of Certificate course and distributed the prizes in quiz competition.



Students attended to the Guest Lecture on “Data Science”

Data Science Concepts

G.SUBBALAKSHMI

Asst Prof

Dept of Computer Science

Ideal College of Arts & Sciences

Vidyuthnagar

Kakinada

Agenda

- What is Data Science?
- Benefits of Data Science
- Data Science Components
- Data Science Process
- Data Science Job Roles
- Data Science Tools
- Applications of Data Science

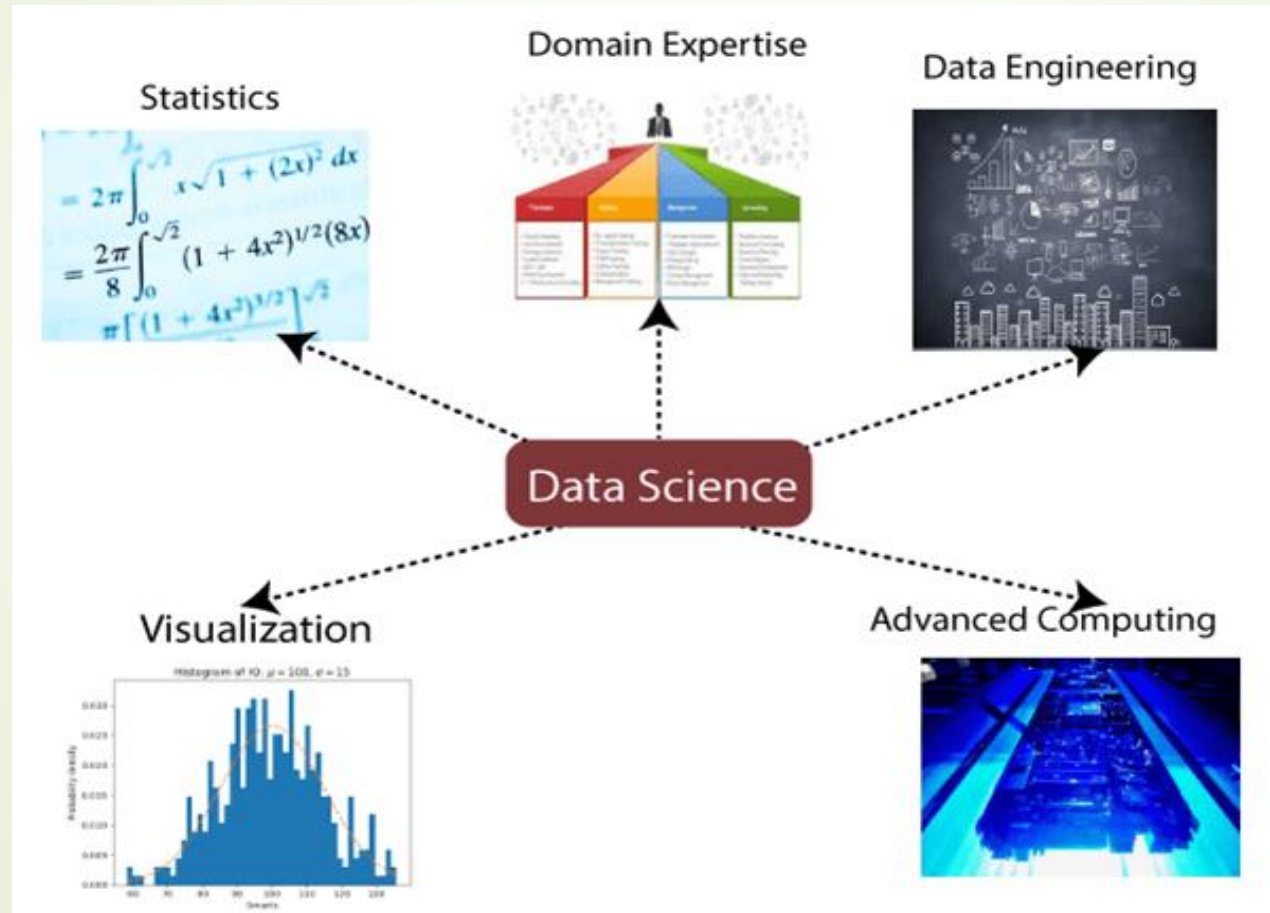
What is Data Science?

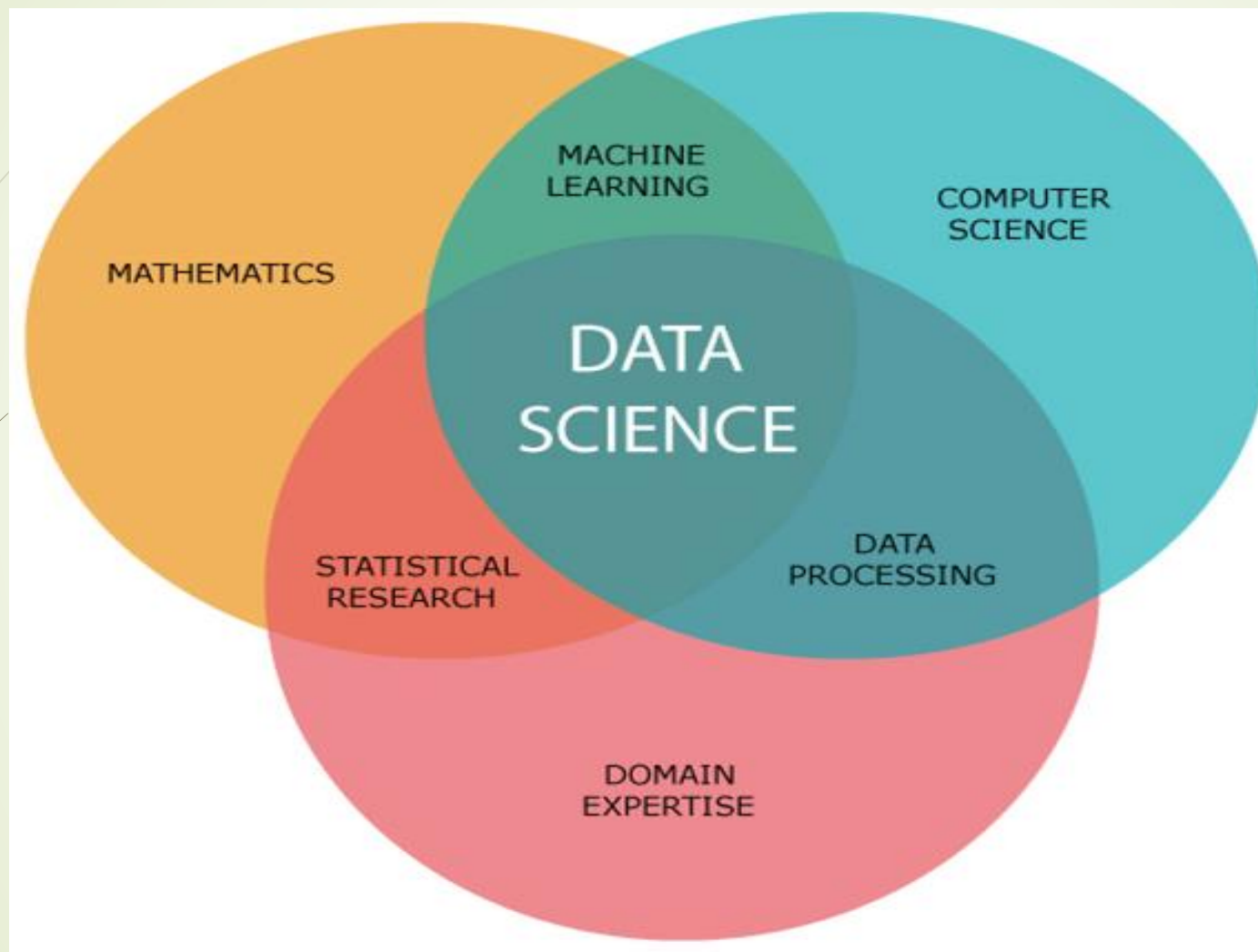
- **Data Science** is the area of study which involves extracting insights from vast amounts of data using various scientific methods, algorithms and processes. It helps us to discover hidden patterns from the raw data.
- Data Science is an interdisciplinary field that uses Statistics, Computer Science, and Machine Learning techniques to extract information from both Structured and Unstructured Data.
- Data Science has become the most demanding job of the 21st century.

Benefits of Data Science

- Improves business predictions
- Interpretation of complex data
- Better decision making
- Product innovation
- Improves data security
- Development of user-centric products

Data Science Components





- 1. Statistics:** Statistics is a way to collect and analyze the numerical data in a large amount and finding meaningful insights from it.
- 2. Domain Expertise:** Domain expertise means specialized knowledge or skills of a particular area.
- 3. Data engineering:** Data engineering is a part of data science, which involves acquiring, storing, retrieving and transforming the data.
- 4. Visualization:** Data visualization is meant by representing data in a visual context so that people can easily understand the significance of data.

5. **Advanced computing:** Advanced computing involves designing, writing, debugging and maintaining the source code of computer programs.
6. **Mathematics:** Mathematics involves the study of quantity, structure, space and changes.
7. **Machine learning:** Machine learning is backbone of data science. Machine learning is all about to provide training to a machine so that it can act as a human brain.

Data Science Process



1. Discovery:

Discovery step involves acquiring data from all the identified internal & external sources, which helps you answer the business question.

The data can be:

- Logs from web servers
- Data gathered from social media
- Census datasets
- Data streamed from online sources using APIs

2. Preparation:

Data can have many inconsistencies like missing values, blank columns, an incorrect data format, which needs to be cleaned.

3. Model Planning:

In this stage, we need to determine the method and technique to draw the relation between input variables. Planning for a model is performed by using different statistical formulas and visualization tools.

4. Model Building:

In this step, the actual model building process starts. Here, Data scientist distributes datasets for training and testing. Techniques like association, classification, and clustering are applied to the training data set. The model, once prepared, is tested against the “testing” dataset.

5. Operationalize:

We deliver the final baselined model with reports, code and technical documents in this stage. Model is deployed into a real-time production environment after thorough testing.

6. Communicate Results

In this stage, the key findings are communicated to all stakeholders. This helps you decide if the project results are a success or a failure based on the inputs from the model.

Data Science Job Roles

Most prominent Data Scientist job titles are:

- Data Scientist
- Data Engineer
- Data Analyst
- Statistician
- Data Architect
- Data Admin
- Business Analyst
- Data/Analytics Manager

Data Scientist:

Role: A Data Scientist is a professional who manages enormous amounts of data to come up with compelling business visions by using various tools, techniques, methodologies, algorithms, etc.

Data Engineer:

Role: The role of a data engineer is of working with large amounts of data. He develops, constructs, tests, and maintains architectures like large scale processing systems and databases.

Data Analyst:

Role: A data analyst is responsible for mining vast amounts of data. They will look for relationships, patterns, trends in data.

Statistician:

Role: The statistician collects, analyses, and understands qualitative and quantitative data using statistical theories and methods.

Data Administrator:

Role: Data admin should ensure that the database is accessible to all relevant users. He/she also ensures that it is performing correctly and keeps it safe from hacking.

Business Analyst:

Role: This professional needs to improve business processes. He/she is an intermediary between the business executive team and the IT department.

Data Science Tools



SQL



MATLAB

Applications of Data Science

Internet Search:

Google search uses Data science technology to search for a specific result within a fraction of a second

Recommendation Systems:

To create a recommendation system. For example, “suggested friends” on Facebook or suggested videos” on YouTube, everything is done with the help of Data Science.

Image & Speech Recognition:

Speech recognizes systems like Siri, Google Assistant and Alexa run on the Data science technique. Moreover, Facebook recognizes your friend when you upload a photo with them, with the help of Data Science.

Gaming world:

Games are now developed using Machine Learning techniques and they can update themselves when you move to higher levels.

Online Price Comparison:

PriceRunner, Jungle, Shopzilla work on the Data science mechanism. Here, data is fetched from the relevant websites using APIs.



Department of Computer Science
P. R. Government College(A), Kakinada

Event: Guest Lecture on "Data Science Concepts"

Date: 02/12/2023

Lecture by: Smt. G. Subbha Lakshmi
Assistant Professor
Ideal College of Arts & Science
Vidyuthnagar, Kakinada.

G. Subbha Lakshmi
Signature of the Guest

S.NO	Group	Roll.NO	Name of the Student	Signature of the Student
1.	III BSc(MPC)	2220320	M. Rajkumar	M. Rajkumar
2.	III BSc(MPC)	2220310	Ch. Hemant Chakraborty	Ch. Hemant
3.	III BSc(MPC)	2220337	P. Beemesh	P. Beemesh
4.	III BSc(MPC)	2220327	P. Durga Prasad	P. D
5.	III BSc(MPC)	2220307	Y. Rahul	Y. Rahul
6.	III BSc(MPC)	2220332	B. Varaprasad	B. Varaprasad
7.	III BSc(MPC)	2220338	Sk. Syed Baig	Sk. Syed Baig
8.	III BSc(MPC)	2220319	G. Ganesh	G. Ganesh
9.	III BSc(MPC)	2220308	B. Rama Abitha	B. Rama Abitha
10.	III BCom(CA)	3222222	K. SUBRAHMANYAM	K. Subramanyam
11.	III BCom(CA)	3222217	SK. KALESHA	SK. Kalesha
12.	III BCom(CCA)	3222336	G. SATTI RAJU	G. Satti Raju

14.	III rd B.com (CECS)	3222329	K. SIVA	Z. Siva
15	III rd B.com (CECS)	3222326	P. DURGA PRASAD	P. Durga
16	CC	3222328	T. RAM BABU	T. Ram Babu
17	III rd B.com (CECS)	3222330	P. SURYA PRAKASH	P. Surya
18	III rd B.com (CA)	3222245	J. JOHN SUNDARAM	J. John
19.	III rd B.com (CECS)	3222301	G. Nagesh	G. Nagesh
20	III rd B.com CA	3222220	E. Siva Ram	E. Siva Ram
21	III rd B.com (CA)	3222218	K. Trimurthulu	K. Trimurthulu
22	III rd B.com (CA)	3222203	P. SUHASINI	P. Suhagini
23.	III rd B.com (CA)	3222232	A. ESUARI	A. Esuari
24.	III rd B.com (CA)	3222252	SK. Kareemulla	SK. Kareemulla
25.	III rd B.com (CA)	3222201	S. Saranya	S. Saranya
26.	III rd B.com (CA)	3222202	P. Kokila	P. Kokila
27	III rd B.com (CECS)	3222325	Gr. Gayatri Suresh	Gr. Gayatri Suresh
28.	III rd B.com (CECS)	3222315	R. Sreethi	R. Sreethi
29.	III rd B.com (CECS)	3222331	R. Durga Khavan	R. D. Khavan
30.	III rd B.com (CECS)	3222323	O. Likhitha Madhuri	O. Likhitha
31	III rd B.com (CECS)	3222314	P. Rajeshwari	P. Rajeshwari
32.	III rd B.com (CECS)	3222318	N. PAUANI	N. Pauani
33	III rd B.com (CA)	3222228	K. AISHWARYA	K. Aishwarya
34	III rd B.com (CA)	3222207	K. LAKSHMI SIREESHA	K. Lakshmi Sireesha
35	III rd B.com (CA)	3222242	SK. Rukhanya Sultana	SK. Rukhanya Sultana
36	III rd B.com (CA)	3222213	K. Sreethi Sudha	K. Sreethi Sudha
37	III rd B.com (CA)	3222203	P. suhasini	P. Suhagini
38	III rd B.com (CA)	3222229	Karuna Rethu	Karuna Rethu
39	III rd B.com (CA)	3222232	Esuari	Esuari
39	III rd B.com (CA)	3222242	Priyanka	Priyanka
40	III rd (MScS)	2221125	Y. Mahesh	Y. Mahesh
41	III rd (MScS)	2221121	T. Durga Simhadri	T. Durga Simhadri
42	III rd MScS	2221128	P. Moni Kantha	P. Moni Kantha
42	III rd MScS	2221134	P. Nagadurgarao	P. Nagadurgarao

S.NO	Group	Roll.No	Named the student	Signature of the student
44	Mscs	2221127	K. Srinivasa Rao	K. Srinivasa Rao
45	Mscs	2221123	V. Marikanta	V. Marikanta
46	Mscs	2221122	N. Venkatesh	N. Venkatesh
47	MCCS	2221320	N. Pavan Kumar	N. Pavan Kumar
48	B.com [CECS]	3222320	SK. Reshma	SK. Reshma
49	B.COM (CCS)	3222305	N.V.S. - RAMESH	N.V.S. Ramesh
50	B.COM (CECS)	3222306	SOWJANYA B.	Sowjanya B.
51	B.com [C.A]	3222255	SK. Fathimundisa	SK. Fathima
52	B.com (C.A)	3222254	K. ANJALI	V. Anjali
53	B.com (CA)	3222250	B.V. Vijaya	B.V. Vijaya
54	B.com [CA]	3222208	J. Amulya	J. Amulya
55	B.SC [MPCS]	2220301	N. Sivakumari	N. Sivakumari
56	B.SC [MPCS]	2220316	K. L. Satya Sai	K. L. Satya Sai
57	B.SC [MPCS]	2220317	P. Satya Mahadevi	P. Satya Mahadevi
58	B.S.C [MPCS]	2220314	P. Sathvika	P. Sathvika
59	B.SC [MPCS]	2220315	V. Tejaswini	V. Tejaswini
60	BSC [MPCS]	2220331	T.H.S. Rajyalakshmi	Rajyalakshmi
61	BSC (MPCS)	2220312	T.V.S.L. Harshithi	T.V.S.L. Harshithi
62	BSC (MPCS)	2220309	S. Anusha	S. Anusha
63	BSC (MPCS)	2220303	M. priya chandrika	M. P. Chandrika
64	BSC [MPCS]	2220304	P. Nandini	P. Nandini
65	"	2220317	P. Satya Mahadevi	P. Satya Mahadevi
66	Bsc [MPCS]	2220311	A.S. Satya Vidhyardhini	A. Vidhyardhini
67	BSC (MPCS)	2220313	K. Deepika	K. Deepika
68	B.Sc (MPCS)	2220318	K. Harshita Anjali	Anjali
69	BSC (MPCS)	2220328	D. Siva Sarani	D. Siva Sarani
70	BSC (MPCS)	2220330	S. Jayanthi	S. Jayanthi
71	BSC [MPCS]	2220326	I. Sailakshmi	Sailakshmi
72	BSC [MPCS]	2220305	G. Sailaja	G. Sailaja
73	BSC [MPCS]			

74.	III B.Com(CA)	3222304	K. LAKSHMI PRASANNA	K. pranna
75.	III B.Com(CA)	3222248	G. prasada	g. prasada
76.	III B.Com(CA)	3222216	T. Mounika	T. Mounika
77.	III B.Com(CA)	3222230	P. H. Chandana	P. H. Chandana
78.	III B.Com(CA)	3222206	D. Sreedhara	D. Sreedhara
79.	III B.Com(CA)	3222214	K. Lokeshwari	K. Lokeshwari
80.	III B.Com(CA)	3222205	T. Dhana Lakshmi	T. Dhana Lakshmi
81.	III B.Com(CA)	3222240	V. Divya	V. Divya
82.	III B.Com(CA)	3222204	B. Bhavani	B. Bhavani
83.	III B.Sc(MSCS)	2221103	N. Pushpasi	N. Pushpasi
84.	III B.Sc(MSCS)	2221131	G. H. Sandhya Ratnam	G. Sandhya
85.	III B.Sc(MSCS)	2221338	S. Anusha	S. Anusha
86.	III B.Sc(MSCS)	2221114	A. V. N. Mounika	A. Mounika
87.	III B.Sc(MSCS)	2221119	B. Moudula	B. Moudula
88.	III B.Sc(MSCS)	2221310	P. Bhavani	P. Bhavani
89.	III B.Sc(MSCS)	2221113	S. Rakshitha	S. Rakshitha
90.	III B.Sc(MSCS)	2221301	Ch. Ramadevi	Ch. Ramadevi
91.	III B.Sc(MSCS)	2221114	P. Vamsi Priya	P. Vamsi Priya
92.	III B.Sc(MSCS)	2221111	A. Sai Vidyanathi	A. Vidyanathi
93.	III B.Sc(MSCS)	2221115	S. Uma Devi	S. Uma Devi
94.	III B.Sc(MSCS)	2221313	A. S. Sivanthi	A. S. Sivanthi
95.	III B.Sc(MSCS)	2221101	K. Vijitha	K. Vijitha
96.	III B.Sc(MSCS)	2221107	K. Vijaya	K. Vijaya
97.	III B.Sc(MSCS)	2221118	K. Rohini Kumari	K. Rohini
98.	III B.Sc(MSCS)	2221116	L. Nageswari	L. Nageswari
99.	III B.Sc(MSCS)	2221304	Ch. Shwamma	Ch. Shwamma
100.	III B.Sc(MSCS)	2221303	P. Iswarya	P. Iswarya
101.	III B.Sc(MSCS)	2221109	K. Durga Bhavani	K. Durga Bhavani
102.	III B.Sc(MSCS)	2221112	N. Siva Jyothi	N. Jyothi
103.	III B.Sc(MSCS)	2221108	P. D. L. Prayanka	P. Prayanka
104.	III B.Sc(MSCS)	2221110	P. Swathi Veera Satya	P. S. V. Satya