

Learning lessons from Data Science Camps

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Swinfy

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Outline - Cultivation of mind should be the ultimate aim of human existence. - Dr. B.R Ambedkar

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About Me - I have no particular talent. I am merely inquisitive. - Albert Einstein

- Currently Data Engineer at Ministry of Rural Development (MoRD) 2023 onwards
- Data Analyst at LibTech India (2020-2022)
- Post Graduation: Public Policy and Governance (2018-2020) from Azim Premji University
- Under Graduation: BSc Physics(Major) and Data Science(Minor)(2015-2018) Azim Premji University
- Schooling: Telangana Social Welfare Residential Institutes

About CCDS - Unless you can tell the computer what to do, soon the computer might tell you what to do! - Marc Andreesen, Netscape

- The age of computing began around 30 years ago and there have been exponential advancements. It has been transforming the way we live, interact and imagine the spaces around us. We would like to give the power of computing to underprivileged and underrepresented groups through our unique initiative called Certification Course for Data Science (CCDS) internally known as ‘Code For Cause’ . So these communities hold the power and can contribute to this digital and computing revolution.
- Secretary of Social Welfare and Sathish Thipparapu - passionate teacher and IT employee started CCDS in 2019 to provide employment to Social Welfare Degree college.
- First batch - 2019 placed 45 out of 75 trained students for about 3 months camp.

About CCDS bit more

- Now every year atleast places 200-2500 students from Social Welfare, Tribal Welfare and other camps. Since beginning of this initiative nearly placed 2,000 students into IT sector.
- Driven by social service and paying back movement
- All the trainers are people who got placed from these very camps and few other committed volunteers.

Components of our success

- Environment - Learning Space
- Curriculum - Learn By doing approach
- Community Bonding

Learning Space

- Residential Program for 3 months
- Regional Language
- Availability of laptops 24 x 7
- Role models from same schools / community / socio-economic background
- All the trainers are who are currently doing jobs or have been in IT sector.
- Getting best pool from most marginalized community through screening
- Peer Learning
- Men and Women separate camps
- Instant Gratification or incentive model is built in everyday class.
By providing different country currency or recognizing best performed student everyday

Curriculum - Game of Whats and Hows

- Familiarity with keyboard through excel shortcuts
- Familar datasets - No Iris / Cuisine , here we should know whats are somewhat familar to students then we teach hows
- connection tools vlookup - joins - merge
- T-shape curriculum - Start with excel then bit of sql then python

Sample Curriculum - Navigating the Narrow Corridor to Data Science Mastery

Swinfy DATA SCIENCE TRAINING CURRICULUM



Module-1 : DATA ANALYTICS with Dynamic DASHBOARDS

Mathematics & Statistics

Introduction | Data | Data Types | Data Collection Methods | Meaning of Variables & Observations | Measures of Center | Measures of Spread | Measures of Shape | Missing Values | Outliers | Data Distributions | Sampling | Hypothesis Testing | Statistical Significance | T-Test | Anova | Correlation | Linear Regression | Logistic Regression | Cluster Analysis | Time Series | Probability | Linear Algebra | Multivariate Calculus

Advanced Excel

Introduction | Excel Shortcuts | Entering, Editing and Formatting Data | Managing Worksheets | Data Validation | Conditional Formatting | Data Consolidation | Freezing Techniques | Text Wrapping | Text to columns | Removing Duplicates | Functions & Formulas | Lookups (V/H/X) | Index & Match | Charts | Slicers | Dropdown Dashboards | Sort, Filter, Subtotal | PivotTables | Calculated Fields | Protecting sheets | Automation | Intro to VBA Macros

Google Sheets

Introduction | Sharing and Organizing | Version History | Edit History | Protecting Sheets | Filter | Split | Unique | Query Function | Sort | Importrange | Importfeed | Importhtml | Google Translate | Google Finance | Sparklines | Create QR codes | Char function | Regexpextract | ArrayFormulas | Google Sheets Add-ons | Integrate with Google forms, Google Docs | Special Charts | Checkboxes | Explore | Intro to Apps Script

Module-2 : DATA MANAGEMENT with Complex Querying & BIG DATA CONCEPTS

SQL Server (/ MySQL /NoSQL)

Introduction to Database Concepts & RDBMS | Data Warehousing Basics | OLAP, OLTP basics | Data Importing | SQL Syntax | DDL, DML, DQL, DCL, TCL Commands | Creating Database & tables | Primary & Foreign Key | Constraints | Data Filtering | Sorting | Aggregation | Query Execution Order | Complex Querying | Joins (Inner, Left, Right, Full, Self) | Union & Union All | Subqueries | Aggregate & Scalar Functions | Set Operations | Window Functions | Index, Views, Triggers, Stored Procedures | Alter, Update, Delete, Truncate, Drop | Query Optimization | Intro to Data Engineering with Cloud Concepts - GCP & GBQ

Module-3 : DATA VISUALIZATION with Business Intelligence Tools

Tableau (/ PowerBI /QlikView)

Introduction to Data Visualization and Tableau | Principles of Data Visualization | Download & Install Tableau | Importing data into Tableau from different file types | Live and Extract | Dimensions & Measures | Data Manipulations | Data aggregations | Filters & Parameters | Data Blending | Joins | Comparison charts | Relationship Charts | Distribution Charts | Composition Charts | Layouts | Dashboards | Storytelling with Data | Publishing

Module-4 : DATA SCIENCE with Machine Learning & Natural Language Processing

Python with ML & NLP (/R Language)

Introduction to Python | Installing Anaconda | Understanding the Jupyter Notebook & Google Colab | Development Environment (IDE) | Lists, Tuples, Dictionaries, Variables | Pandas | Numpy | Matplotlib | ggplot2 | Seaborn | Scikit Learn | Scrapy | Beautiful Soup | Data frames | Data Frame Manipulation | Indexing, Filtering | Sorting & Summarizing | Descriptive Statistics | Combining and Merging Data Frames | String Manipulation | Creating arrays | Data Processing using Arrays | File Input and Output | Regression techniques in Python | Decision Trees (CHAID, CART) | Stats models | K-Means | Hierarchical Clustering | Machine Learning | NLP Concepts | Big Data Concepts | Could Data Engineering concepts of Google Cloud

Real World PROJECTS (Addition to Modules)

MIS Reports & Dashboards | RFM Analysis | Stack Ranking | Root Cause Analysis | Pre-Post Analysis | Market Basket Analysis | Survey Data Analysis | Customer Segmentation Analysis | Financial Data Analysis | Retail Analytics | HealthCare Analytics | Social Media Analytics | Market research Analytics | People Analytics | WFM Analytics | Media Mix Modeling | Sentiment Analysis | Topic Modeling

CAREER GUIDANCE

Resume Preparation | Email Writing | Naukri Account Creation | LinkedIn Account Creation | Other top job portals | Placement Assistance | Knowledge Topics (English, Social & Technology) | Guest Lectures | Mock Interviews | Individual & Group Assignments | Regular Feedbacks | Showtime of Data & Coding Movies (Interstellar, Moneyball, Wall-E, The Social Dilemma, etc) | Job Interview Puzzles

Sample Screening Question Paper

TSWRDC(W) - Bhupalpally
Assessment Test for the Advanced Analytics Training Program



Full Name: _____

Degree: BSc BCom BBA Other

Branch: _____

CGPA : _____

Instructions: 60Min Duration | Each question carries One mark, unless specified | Answer the all questions | No Negative Marks

- 1) He crossed the broken bridge _____ warning.
 in spite of in spite off on about
- 2) He told me that he _____ watching the movie.
 is finished was finished had finished not finished
- 3) He devotes much of his time _____ for the future.
 to planning to plan plan planning
- 4) _____ he didn't know what to say, he said nothing
 because unless though until
- 5) Find Correct Spelling in given words
 Adventitious Adventitous Adventitus Adventituous
- 6) _____ children recited _____ poem in _____ honour of _____ Prime Minister.
 the, a, an, a a, the, the no article, a, an, the the, a, the, the
- 7) She was working on her computer with her baby next to _____.
 herself her her own hers
- 8) A hater of knowledge and learning
 Bibliophile Philologist Misogynist Misologist
- 9) How much did it _____ to reach Hyderabad.
 Charge Price cost estimate
- 10) There is nothing that _____ of us can do to help.
 none each any every
- 11) Would you _____ my dog for this weekend?
 look look after look up look for
- 12) Correct meaning of the phrase : Lean and mean
 To Destroy something To Create something To use what is necessary To not afraid of any situation
- 13) I _____ this book since morning.
 had been reading has been reading have had read having reading
- 14) Neither of the paintings _____ sold.
 have been were are was
- 15) Opposite of Superiority
 seniority juniority inferiority urbanity
- 16) What was the day on 15th august 1947 ?
 Friday Saturday Sunday Monday
- 17) Find the odd man out: 2, 5, 10, 17, 26, 37, 50, 64
 50 37 26 64
- 18) If the selling price is doubled, the profit triples. Find the profit percent ?
 200% 100% 300% 150%
- 19) A student multiplied a number by $\frac{3}{5}$ instead of $\frac{5}{3}$. What is the percentage error in the calculation ?
 54% 64% 74% 34%
- 20) If 20% of a = b, then b% of 20 is the same as :
 4% of a 6% of a 8% of a 10% of a
- 21) In how many ways can 10 students be arranged in a row?
 10! $(10 \cdot 2)$ ${}^{10}C_5$ ${}^{10}P_5$
- 22) The total age of A and B is 12 years more than the total age of C and D. C is younger than A by:
 12 4 6 3

23) How many times the hands of a clock coincide in a day
 24 22 23 21

24) A fruit seller had some apples. He sells 40% apples and still has 420 apples. Originally, he had:
 588 600 672 700

25) In a school of 286 in total, the ratio of boys and girls 8:5. If 22 more girls are admitted into the school, the ratio becomes
 12:7 10:7 8:7 4:3

26) If a quarter kg of potato costs 60 rupees, how many paise will 200 gm cost?
 48 54 56 72

27) What is the probability of getting a sum 9 from two throws of a dice?
 1/6 1/8 1/9 1/12

28) Ram is three times as old as his Sam. 2 years ago he was five times as old as Sam. What is the present age of Ram?
 12 14 18 24

29) In a certain language, FLOUR is coded as HKOTT, Then APPLE will be coded as?
 CORKH CORKG CORHG CROKH

30) If $1=3, 3=5, 5=7$, then $7=?$
 5 2 6 7

31-35) Go through the table below and answer the below 31 to 35 questions:

Student	Maths	Telugu	English	Biology
Ram	40	40	60	60
Syam	60	100	80	60
Stephen	50	80	90	80
Kranti	80	80	40	50
Sayad	100	60	30	60
Tara	50	40	50	60

31) The average marks of Ram in all subjects
 60 40 50 35

32) The average total marks of all students
 200 300 250 150

33) What is the range value of subject level marks
 70 80 100 50

34) The average marks in the Biology subject
 61.67 71.2 50.5 55.4

35) The % diff of Kranti's highest marks from Tara's highest marks
 66.6% 65.5% 95% 33.3%

36-43) Match the following 8 items of Section A with Section B items

Section A	Section B	Section A	Section B
36) e-commerce	[] A) 360	40) Amazon	[] F) Joe Biden
37) OTP	[] B) 10	41) 7, 10, 8, 11, 9, 12, ...	[] G) Flipkart
38) M	[] C) Integers	42) Z	[] H) One Time Pin
39) Triangle	[] D) One Time Password	43) USA	[] I) Andy Jassy
	E) Natural numbers		J) 1000

44) The 'heart' of the processor which performs many different operations _____

Motherboard Arithmetic & Logic Unit Control Unit Memory

45) The device used for converting maps, pictures, and drawings into digital form for storage in computers?
 Image Scanner Digitizer Servers Scanner All

46) CPU Consists of
 ALU+CU ALU+ROM All None

47) What is the full form of OTT?
 On The Television Over The Top Outside The Theatre None

48) Documents, Movies, Images and Photographs etc are stored at a ?
 Web Server Print Server File Server Application Server

49) The Brain of any computer system is?
 Memory Control Unit CPU ALU

50) Which of the following is the valid measurement unit of the memory?
 KB MB GB All

Our Success Story - Much of human history has consisted of unequal conflicts between the haves and the have-nots. - Jared Diamond, Guns, Germs, and Steel: The Fates of Human Societies

Few of Success stories: There are around 2,000 students got placed through this initiative

[TSWRDC : Data Science Placement Track record \(2019 to 2023\)](#)

- 1 Rani Grinikadi
Data Scientist
Airtel, 32 LPA
(Mahabubnagar, Batch 2019)
- 2 Pavani Pocharam
AM - Data Operations
IDBI, 12 LPA
(Vikarabad, Batch 2021)
- 3 Amulya Ginnu
Senior Analyst
Merck Serono, 12 LPA
(Sircilla, Batch 2021)
- 4 Srija Bathoju
Senior Analyst
Thomson Reuters, 11 LPA
(Kannigiri, Batch 2019)



- 5 Sowanya Bandi
Data Analyst
AP Govt., 9 LPA
(Warangal, Batch 2019)
- 6 Amala Dommatla
Senior Analyst
Google, 8 LPA
(Siddipet, Batch 2021)



- 7 Shirisha Pasarangoda
Business Analyst
IKEA, 7.5 LPA
(Bhubanapally, Batch 2019)



- 8 Lanka Deena
Data Analyst
S&P Global, 7 LPA
(Khamman, Batch 2019)



- 9 Shireesha Karrethipaiyah
Data Analyst
Dr Reddys, 6.5 LPA
(Gadwal, Batch 2020)



- 10 Shirisha Akulkunta
Data Analyst
Mass Mutual, 6 LPA
(Bhongir, Batch 2022)



(1/2) A List of 100 placed Students from batches (2019 to 2023)

Sno	Student Name	Company	Package	Sno	Student Name	Company	Package
1	Karuna Paruvanti	Ernst & Young	5.5 LPA	28	Nayya Putti	Chubb Business	4.5 LPA
2	Umadevi Bellapally	Mass Mutual	5.5 LPA	27	Riyanka Sanga	Chubb Business	4.5 LPA
3	Nandini Budige	Mass Mutual	5.5 LPA	28	Nishitanshi K	GravisAI	4.5 LPA
4	Shrishti Alankrita	Mass Mutual	5.5 LPA	29	Veeta Makela	Cognemini	4.5 LPA
5	Prathyusha Peddi	Mass Mutual	5.5 LPA	30	Akhila Kanakam	Chubb Business	4.5 LPA
6	Vasantha Indrakanti	Mass Mutual	5.5 LPA	31	Kalyani Neeravath	Accenture	4.5 LPA
7	Sucharitha Dibba	Mass Mutual	5.5 LPA	32	Manisha Gudipati	Accenture	4.5 LPA
8	Harka Gade	Mass Mutual	5.5 LPA	33	Deepika Sindhu	Cognizant	4.5 LPA
9	Sangeetha Sankel	Mass Mutual	5.5 LPA	34	Mounika Vodela	TekFriday	4 LPA
10	Mounika Narva	Mass Mutual	5.5 LPA	35	Vani Sabbari	TekFriday	4 LPA
11	Pavanika Gora	Mass Mutual	5.5 LPA	36	Prasanna Annapu	Genaqt	4 LPA
12	Thirumala Erugurala	Mass Mutual	5.5 LPA	37	Manjula Akuturi	Cognizant	4 LPA
13	Nikhitha Vadda	Mass Mutual	5.5 LPA	38	Nayya Ponaraganti	Cognizant	4 LPA
14	Navya Cherupalli	Mass Mutual	5.5 LPA	39	Swathi Chikkudu	Cognizant	4 LPA
15	Shruthi Amerapu	Mass Mutual	5.5 LPA	40	Sowmya Choles	Cognizant	4 LPA
16	Manusha Abbi	Mass Mutual	5.5 LPA	41	Gourhami Koppari	Cognizant	4 LPA
17	Rajeshwari Korra	Mass Mutual	5.5 LPA	42	Sriketha Palle	Cognizant	4 LPA
18	Anusha Middathapety	Mass Mutual	5.5 LPA	43	Shravani Donepalli	Vivifi	4 LPA
19	Sravani Marripeddi	Mass Mutual	5.5 LPA	44	Ayesha Mohammad	Shore Infotech	3.8 LPA
20	Aparna Gujari	Mass Mutual	5.5 LPA	45	Sandhya Bathuri	Swiggy	3.8 LPA
21	Kavya Katraguni	Mass Mutual	5.5 LPA	46	Ravalithi Pulimaddi	Cognizant	3.8 LPA
22	Laya Beijam	Mass Mutual	5.5 LPA	47	Ravalithi Pulimaddi	Cognizant	3.8 LPA
23	Gouthami Naikka	Mass Mutual	5.5 LPA	48	Manatha Narumalla	Cognizant	3.8 LPA
24	Sujrada Beijam	Mass Mutual	5.5 LPA	49	Pooja Katravath	Swiggy	3.6 LPA
25	Amala Dommatla	Accenture	5.1 LPA	50	Shruhi Dhara	Cognizant	3.6 LPA

(2/2) A List of 100 placed Students from batches (2019 to 2023)

Sno	Student Name	Company	Package	Sno	Student Name	Company	Package
51	Akhila G	Cognizant	3.6 LPA	78	Raghav Jyothi A	Keertana Finserve	3 LPA
52	Kalyani Durgem	Cognizant	3.6 LPA	77	Deepika M	Keertana Finserve	3 LPA
53	Kavitha Meekala	Cognizant	3.6 LPA	78	Lavanya Aturi	Altevis	3 LPA
54	Prathyusha Regunti	Ciel HR Services	3.5 LPA	80	Swathi Venkula	BNew Mobiles	3 LPA
55	Chaitanya Mette	Cognizant	3.5 LPA	80	Sandhya Malai	Nekkanti Systems	3 LPA
56	Ayesha Chirumalhi	Cognizant	3.5 LPA	81	Priyanka M	Bundi	3 LPA
57	Onagari Radhana	Cognizant	3.5 LPA	82	Susmitha Nakkala	Voziq	3 LPA
58	Dathrika Akhila	Cognizant	3.5 LPA	83	Vanaja Gajaria	Voziq	3 LPA
59	Haritha Pathenagari	Cognizant	3.5 LPA	84	Shravani Bandi	Swiggy	3 LPA
60	Krupayethi Kuntala	Cognizant	3.5 LPA	85	Soumya Gajala	Swiggy	3 LPA
61	Padma Gedda	Team lease	3.4 LPA	86	AKHILA SIDDEM	Voziq	3 LPA
62	Vineela Adepu	Keertana Finserve	3 LPA	87	Hymavathi Allikanti	Voziq	3 LPA
63	Tejaswini Thota	Keertana Finserve	3 LPA	88	Alakya Malegundu	Voziq	3 LPA
64	Lailitha Amgotra	Keertana Finserve	3 LPA	89	Anthia Begni	MResult	3 LPA
65	Yamuna Jakki	Keertana Finserve	3 LPA	90	Govinda Chithorai	Team lease	3 LPA
66	Himasi Anagardusa	Keertana Finserve	3 LPA	91	Vignani Madugula	Cognizant	3 LPA
67	G.Vijayalakshmi	Meritytics	3 LPA	92	Manasa Betapu	Voziq India	3 LPA
68	Sujitha Bhukya	Meritytics	3 LPA	93	Ramya Gadatadu	Clarivate	3 LPA
69	Sowmya Bathi	Keertana Finserve	3 LPA	94	Saritha Maraboina	Cognizant	3 LPA
70	Madhavi Kakapalli	Keertana Finserve	3 LPA	95	Shivalakshmi Naika	Keertana Finserve	3 LPA
71	Anusha Yedula	Keertana Finserve	3 LPA	96	Susheda Bhukya	Keertana Finserve	3 LPA
72	Akhila Vadda	Keertana Finserve	3 LPA	97	Navatha Prasangati	Keertana Finserve	3 LPA
73	Pavanika Korra	Cognemini	3 LPA	98	Kaisipuji Ahilia	Keertana Finserve	3 LPA
74	Venkatalakshmi Koramutta	Keertana Finserve	3 LPA	99	Akhila Anikula	Swiggy	3 LPA
75	Snehalatha Sama	Keertana Finserve	3 LPA	100	Nikhitha Mondi	Swiggy	3 LPA

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Our Team - If are only for ourselves then what we are!

