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Agenda:

Intro- Company, Shortlist, Profile,
Overall Placement Profiles- SDE and NON-SDE(Core, DS, DA/BA,PA,APM, Business profiles-ABM, Associate Consultant)
Placement Journey

Resume:
Ideally: 1-2 Interns, 2-3 Projects, 1-2 PORs, Extracurricular/Achievements
DS Profile: Projects: ML Related, DL is not necessary, Skills: concisely like,
DA/BA: Projects: ML, PowerBI-SQL, Case studies
PA/APM: Projects: Case studies

Resources I used which were recommended by my seniors:

1. Analyst Preparation Plan: Analyst_Placement_Plan.pdf (You can fall back to this for timeline idea and other stuffs)
2. Roadmap made for me by one of my mentor Ayush Bhaiya: Roadmap
3. Pulkit Jain JP Morgan Experience from TPC Website

The following things are relevant for Data Analyst, Product Analyst, ABM and APM

Few Links:
List of companies and test pattern in 2023: Companies 2023

I broadly splitted my Placement preparation into 2 major parts:
1. Test Preparation
2. Interview Preparation

Let's understand Test types of various companies: remember the following are types of tests(on the basis of importance), but there are tests that are a mixture of all of them..
1. Aptitude test: Quant, LR-DI and Verbal-All companies ask this
2. SQL test: MCQs, Query writing-Meesho APM, Media.net PA, Deloitte USI ask this
3. Python: MCQs, Code writing, Pseudo Code writing
4. ML: MCQs both related to theory and code, rare to ask code writing
5. Fast Mathematics (Future first, Axxela have these type generally)
6. Excel MCQs(Less frequently asked)
7. Behavioral (Rarely asked)

Aptitude Resources:

- Aptitude is something that many people have inherited very strongly, but many are not (including me) so people like me have to practice a variety of questions to get strong in aptitude. Ideally, you should start practising from summer daily for 2 hours minimum, and get hold of it by July-August.
- In case you have an internship in the summer, I would advise you to try working on Aptitude on weekends at least for 3-4 hrs.
- Join a test series to know where you stand. Not only MAS(my analytics school), join other test series also
- Resources:
Times Material (I personally followed this, I used to solve- solved examples and Exercise B of each chapter, one thing I could have done better was more time-bound practice which I started quite late)
-Arun Sharma (One of my mentors recommended this, but I found it very lengthy. If you are weak in any particular topic you can practice from here)
-Gfg Aptitude (Can use if you are running short on time, or incase you feel you need to learn some topic in less time)
-2IIM Cat and topic wise questions (CAT pyqs are must to do, apart from pyqs this website has chapter wise CAT level questions)
-Prepleaf(Time bound practice, chapterwise as well as full tests)
-Indiabix (Easy questions, good for starting base, or practise to solve questions mentally)

Some youtube channels I followed:
https://youtu.be/KE7tQf9spPg?si=HGuwvEENBwISbJIO
https://www.youtube.com/@DearSir
https://www.youtube.com/@FeelFreetoLearn

SQL Resources:

- You are required to know all the theory till JOINs a to z, and should be able to write nested subqueries (not really tough go through the resources I mentioned)
- Window functions are not important, I was asked in Media.Net interview if I am aware of window functions, to which I said yes I am aware of few functions, to which he was surprised and said he was not expecting this, and then moved on, so my advice would be same to just know the basics of window functions
Theory:
https://www.udacity.com/course/sql-for-data-analysis--ud198?autoenroll=true
https://youtu.be/nJIEIzF7tDw?si=nZSB6EDaPeSRlDeW(Very important)
https://www.w3schools.com/sql/
https://sqlzoo.net/wiki/SQL_Tutorial
https://www.khanacademy.org/computing/computer-programming/sql

Practice:

https://www.hackerrank.com/domains/sql
https://www.sql-practice.com/
https://leetcode.com/list/e55d9ob1/
https://www.interviewbit.com/courses/databases/sql-queries/ (some companies like media.net ask direct questions so do study up all questions from it just before tests start)
https://datalemur.com/ (complicated questions, only do if you have time)

For interviews:
https://www.geeksforgeeks.org/sql-interview-questions/

Python Resources:

- Python coding came in Tiger Analytics, AspectRatio, and few companies had mcqs on Python Study topics like arrays and lists, string manipulation and binary search.
- Biz Roadmap
https://www.hackerrank.com/domains/python
https://www.youtube.com/@freecodecamp/search?query=python
Codeforces (easy basic questions to practice)

For Data Science roles: Most companies now ask basic dynamic programming, nothing too complicated but direct questions from these playlists. Solve all basic starting questions but it is enough to study from any playlist.
Strivers
Aditya Verma

For interviews:
https://www.interviewbit.com/python-interview-questions/
https://www.geeksforgeeks.org/python-interview-questions/

Python for data analysis (matplotlib, numpy, pandas etc):
https://jovian.com/ (not sure if its still completely free but you can check)
https://app.datawars.io/
Freecodecamp from youtube

Books: https://github.com/Jianhua-Wang/oreilly-animal-books-for-Python

Fast mathematics:
- Axxela asks this, earlier Futurefirst also had this type of test.
- But fast math as a whole helps you in your aptitude tests, so you can devote your 5 mins of your day in following resources
https://mathtrainer.ai/
- Rankyourbrain
- Refer few basic fast calculation tricks videos too, when you get time

Excel:

- Few companies ask this in mcq form
- I followed this but did not revise during tests as I had many other things to do. So it is good if you remember basic excel functions (lookup and vlookup are most commonly asked), generally, those are only asked.

ML & DL:

https://app.datawars.io/dashboard
Freecodecamp from youtube
https://jovian.com/
Statquest - for theory and basic understanding. Best resource (can also download its book to revise or if you are short on time but prefer videos)
Gfg for theory revision and mathematics
https://copsdatascience.notion.site/COPS-Data-Science-Community-415f520d1ed543fdaf56219c73cb3dcf

For interviews:
I had the credit card fraud project and a few deep learning projects but every interviewer only asked me about the most basic ML algorithms in the project sometimes direct theory that you should have on your tips or your understanding and reasoning behind what you did or not on your projects and basically overlooked my DL projects. Unless you have been shortlisted by any company that requires DL specifically, expect very few questions on the same.

Statistics:

-only asked in DS companies
-few questions on core statistics but can gain an advantage if you study
-MA202 notes (best resource in my opinion) - mostly questions about probability distributions and moments)
-also study gini impurity formulas not in notes
-Probability and P&C is a must. Practice all questions from Arun Sharma

Interview Preparation:

Data Analyst Interviews, business role interviews:

1. Resume grilling
2. Case studies
3. SQL, Python, Excel
4. Puzzles
5. HR Questions

Puzzles:

Asked in interviews of many companies
https://www.geeksforgeeks.org/puzzles/ (finish all before interviews)

https://interviewbit.com/puzzles/

Case studies:

If you are unfamiliar what are case studies, and what type of questions are asked, go to youtube and watch videos on how to solve guesstimates/profitability/product design/RCA/Market entry etc, and get an idea on these topics from March/April at least 1-2 videos a day.

You can refer to the following:
Guesstimates
Guesstimates-2
Product design framework
Product Management Interview **Frameworks**
PM Interview Resources

Learn PM from Scratch
For Deck-making practice case study competitions here. Can also refer this to get idea on decks.

- From August-Sept, you should start solving at least 1 guesstimate and 1 type of other case study daily to get a hold of the type of cases.
- Pick any casebook, pick 1 case, solve it in your approach, and then check with the casebook what other methods are there
- Hardly takes 1 hr of your day but is very important

Product Manager/APM/PA Interviews:
- Apart from guesstimates, resume grilling:
Product design, RCA, Metric thinking, Favorite product, Technical: how do websites work, recommendation algorithm designing, etc (It was a new type of question that Media.net asked as well as Sprinklr, so be ready for these type of questions)
- PA interviews also ask SQL
- For PM Interviews, product sense is very important which I realised a little later, to avoid same mistake do following:

2. Practice Product Sense often

While you may not have interviews lined up, yet! it's very important that you improve your product sense as often as you can - here's a simple, but powerful 5-min exercise to do it.

Every day pick a different app you use and do these steps:
→ Who is the app built for? (customers/users)
→ What problem(s) is the app solving?
→ Is it solving the problem(s) better than competitor apps? how?
→ Imagine you are the PM for your favorite 3 features of the app. How would you measure success?

Want an extra challenge?
→ Pick an app from the app store that you are not familiar with
→ In any of the apps you chose ask yourself: how would you improve the app if you were the PM for that app?

Source: PM

Resources:
- FMS and IIMA casebook (search on linkedin you will get)
- Also refer to IIT BHU casebook, they have previous year company wise cases
- Refer this Link for casebooks for both product, DA/PA/BA roles

Resume grilling:
- For any intern, project, POR grilling, follow following framework: read somewhere and found it very useful
(i) INTERNSHIPS WHAT you did, WHY you did , HOW you did, WHAT was the impact, HOW you calculated the impact, WHY you took this approach and NOT any other approach
(ii) PROJECT - Same as above -
(iii) PORS - Same as above - + WHAT INITIATIVES you took + WHAT CHALLENGES you faced + HOW did you OVERCOME those challenges
(iv) HR WRITE UPS Refer to the book "64 HR Questions"

My checklist at end days was something like this for interviews:

Priority: Guesstimates, Product design, RCA, Profitability

- ▼ Cases
  - [ ] Guesstimates
  - [ ] Product Design & Product Improvement → Framework
  - [ ] RCA → Framework
  - [ ] Favorite Technical Product
  - [ ] Favorite Physical Product
  - [ ] Profitability Case
  - [ ] Market Entry
  - [ ] Metric Thinking → North star of famous apps
  - [ ] Unconventional
- ▶ Tell me about yourself
- ▼ Technical
  - [ ] SQL
  - [ ] Python
  - [ ] ML
  - [ ] Puzzles
  - [ ] Power BI
- ▶ Projects (1 hour)
- ▶ Intern(1 hour)

1. 3 challenges → 1. Experiments, 2. Rh and Temp
2. 3 learnings → 1. First principle thinking, 2. Networking, 3. Not every problem is worth solving