CHECK LIST

🎯 1️⃣ CDAC EXAM PREP

📌 Section A: English, Quant, Reasoning, Computer Fundamentals

- ☐ Wren & Martin (English Grammar)
- ☐ Foundation of Computing
- ☐ Quantitative Aptitude by R.S. Aggarwal
- ☐ Quantitative Aptitude by M. Tyra
- ☐ Barron's New GRE (for vocab)

📌 Section B: Programming & Core CS

- ☐ Fundamentals of Data Engineering (Joe Reis, Matt Housley)
- ☐ Artificial Intelligence for Dummies (John Paul Mueller, Luca Massaron)
- ☐ The C Programming Language (Kernighan & Ritchie)
- ☐ Let Us C (Yashavant Kanetkar)
- ☐ Data Structures Through C In Depth (S.K. Srivastava)
- ☐ Operating System Principles (Silberschatz, Galvin, Gagne)

📌 Section C: Computer Architecture, Digital, Microprocessors

- ☐ Computer Organization & Architecture (William Stallings)
- ☐ Digital Design (Morris Mano)
- ☐ Digital Design: Principles & Practices (John Wakerly)
- ☐ Modern Digital Electronics (R.P. Jain)
- ☐ The Intel Microprocessor (Barry Brey)
- ☐ Microprocessor Architecture, Programming & Application with 8085 (Ramesh Gaonkar)

🎯 2️⃣ INDIA'S MNC EXAMS (TCS NQT, Infosys SP/DP, Wipro Elite NTH, Capgemini Pooled Drive, Cognizant GenC & Elevate, Accenture ASE) — COMMON SYLLABUS

✅ Quantitative Aptitude

- ☐ Percentages, Profit & Loss
- ☐ Simple & Compound Interest
- ☐ Ratio & Proportion, Ages
- ☐ Time & Work, Pipes & Cisterns
- ☐ Time, Speed & Distance, Boats & Trains
- ☐ Number System, LCM/HCF
- ☐ Averages & Mixtures
- ☐ Permutation & Combination
- ☐ Probability
- ☐ Series & Progression (AP/GP)

✅ Logical Reasoning

- ☐ Coding-Decoding
- ☐ Number Series
- ☐ Blood Relations
- ☐ Syllogisms
- ☐ Statement & Conclusion
- ☐ Data Sufficiency
- ☐ Seating Arrangement (Linear, Circular)
- ☐ Directions (NSEW)
- ☐ Puzzles (Floor, Box)

✅ Verbal Ability

- ☐ Reading Comprehension
- ☐ Error Spotting
- ☐ Sentence Correction
- ☐ Para Jumbles

- ☐ Fill in the Blanks
- ☐ Synonyms & Antonyms
- ☐ Cloze Test

✅ Programming Basics

- ☐ C Programming Basics (data types, operators)
- ☐ Pointers & Arrays
- ☐ Functions
- ☐ Strings
- ☐ Basic Data Structures (Arrays, Linked List, Stack, Queue)
- ☐ Output-based Questions
- ☐ Pseudo Code

✅ Hands-On Coding

- ☐ Practice: Reverse String, Palindrome, Factorial
- ☐ Pattern Printing, Sorting, Searching
- ☐ Array/String manipulation (Substring, Frequency count)
- ☐ File I/O (Rare)
- ☐ SQL: SELECT, JOIN, GROUP BY (for GenC Elevate)

✅ Domain MCQs (as required)

- ☐ DBMS, OS, OOPs (Infosys SP/DP)
- ☐ Cloud basics, Pseudo Code (Accenture ASE)
- ☐ SQL, DSA basics (Cognizant Elevate)
- ☐ Pseudo code & Debugging (Capgemini)

🎯 3️⃣ ADVANCED CAREER SKILL SETS

✅ AI / ML Engineer

- ☐ Python (Numpy, Pandas, Matplotlib, Seaborn)
- ☐ ML Algorithms: Regression, Classification, Clustering
- ☐ Deep Learning: TensorFlow, PyTorch, Keras
- ☐ Model Deployment: Flask, FastAPI, Streamlit, Docker basics
- ☐ Data Cleaning & EDA
- ☐ Basic MLOps (CI/CD for models)
- ☐ Cloud: AWS Sagemaker, Azure ML, or GCP AI
- ☐ DSA + Problem Solving

✅ Data Scientist

- ☐ Statistics & Probability (hypothesis tests, A/B)
- ☐ Data Wrangling (Numpy, Pandas)
- ☐ Visualization: Matplotlib, Seaborn, Tableau/PowerBI
- ☐ Advanced SQL queries
- ☐ Business Understanding
- ☐ Python + Basic R

✅ Full Stack Data Scientist

- ☐ All DS skills above
- ☐ Backend: Python Flask / Django
- ☐ Frontend: HTML, CSS, JS, React basics
- ☐ REST APIs
- ☐ DevOps: Docker, Git, CI/CD
- ☐ Cloud: AWS / GCP / Azure

🎯 4️⃣ CERTIFICATIONS TO COMPLETE

✅ ML & DS

- ☐ Google Professional ML Engineer
- ☐ AWS Certified ML Specialty
- ☐ IBM ML / DS Professional Certificate (Coursera)
- ☐ Stanford Machine Learning (Andrew Ng, Coursera)
- ☐ DeepLearning.AI TensorFlow Developer

✅ DS + Cloud

- ☐ Microsoft Certified: Azure Data Scientist Associate
- ☐ Databricks Lakehouse Fundamentals
- ☐ Google Cloud Data Engineer

✅ Full Stack / Production

- ☐ Docker Certified Associate
- ☐ Kubernetes basics (CKAD)
- ☐ AWS Certified Developer – Associate

🎯 5️⃣ PORTFOLIO MUST-DO

✅ Projects

- ☐ Build & publish 5–6 real ML projects:
    - Classification: Credit Card Fraud / Churn
    - Regression: House Price / Time Series
    - NLP: Sentiment Analysis, Chatbot
    - Computer Vision: Object Detection, Mask Detection
    - Deep Learning: Custom CNN/LSTM

✅ Deploy Projects

- ☐ Host 2+ on Streamlit, Flask, or FastAPI
- ☐ Deploy live via Heroku / Render / AWS Free Tier
- ☐ Add live links to your resume & LinkedIn

✅ DSA

- ☐ Solve 100–200 LeetCode problems
- ☐ Consistent DSA practice for product roles

✅ Open Source

- ☐ Contribute to GitHub or Kaggle notebooks

✅ LinkedIn

- ☐ Optimize headline: “Aspiring ML Engineer | Deep Learning | Python | AWS”
- ☐ Add highlight: “Deployed 5+ ML projects | 200+ LeetCode | Open Source Contributor”

✅ Personal Branding

- ☐ Write 1–2 Medium articles explaining your projects

🎯 🅰️ CAREER ACTION

✅ Apply Off-Campus

- ☐ Target Google, Microsoft, Amazon, Adobe, Atlassian, DE Shaw, NVIDIA, Qualcomm
- ☐ Target high-paying startups: CRED, Razorpay, Swiggy, Zepto
- ☐ Target international: Goldman Sachs, Bloomberg

✅ Interview Prep

- ☐ Master DSA, ML System Design
- ☐ Mock Interviews for problem solving + ML scenarios

✅ Internships

- ☐ Secure 1–2 ML/DS internships if possible

✅ Consistent Application

- ☐ Use LinkedIn, AngelList, Wellfound, Hirect, Triplebyte