TECHNICAL JOB PROFILES

💼 Job Profile 1: Full Stack Developer

Role Summary:
Responsible for building both frontend and backend of web applications. Works with client-side (UI/UX) and server-side (logic, databases).

Tech Stack:
HTML, CSS, JavaScript, React/Angular, Node.js, MongoDB, Express.js, MySQL/PostgreSQL

✅ ROUND 1: Aptitude + Verbal + Web Basics

📌 **What's Tested:**

- Quantitative Aptitude (Speed, Time, Percentages, Puzzles)

- English Comprehension and Grammar

- HTML/CSS Basics, JavaScript Fundamentals

📚 **Resources:**

- Aptitude: PrepInsta, Testbook App, RS Aggarwal (Quant Book)

- Web Basics: FreeCodeCamp, W3Schools, HTMLDog

- JavaScript: JavaScript.info, CodeWithHarry (YouTube)

✅ ROUND 2: Frontend + Backend Coding Round

📌 **Topics to Prepare:**

Frontend:

- HTML5, CSS3, JavaScript ES6+

- React (Hooks, JSX, useState/useEffect), Routing

- Responsive Design, API Calls using Axios

Backend:

- Node.js, Express.js (Routing, Middleware)

- MongoDB or MySQL (CRUD, Joins, Schemas)

- Authentication (JWT, Sessions)

🔨 **Projects:**

- Personal Portfolio Website (React + Node)

- Blog CMS or Todo App (MERN Stack)

✅ **ROUND 3: Project Discussion + System Design Basics**

- Explain your project structure (Folder setup, DB schema)

- Questions on state management, REST API design

- Basic understanding of DevOps, version control (Git, GitHub)

🎥 **Resources:**

- "System Design Simplified" – YouTube

- Git & GitHub full course by Apna College or Kunal Kushwaha

📘 **Final Preparation Tips:**

- Build 2 deployable full stack projects with live demo links

- Practice Git commands and GitHub workflows

- Prepare 3–5 STAR-based stories for HR interview (e.g., project challenges)

🌐 **Where to Apply:**

Platform	Description
LinkedIn	Set alerts for "Full Stack Developer Fresher"
Naukri.com	Use filters like "0-1 years experience"
Instahyre	Premium startups hiring fresh devs
AngelList (Wellfound)	Remote + startup full-stack jobs
Internshala	Full stack internships that convert to PPO
TCS NQT / Wipro / Infosys Tests	Apply via company exams
Company Career Pages	Zomato, Swiggy, Flipkart, Razorpay

💼 Job Profile 2: Data Analyst

Role Summary:
Uses data to find patterns, generate reports, and support business decisions. Involves SQL, Excel, Python, and visualization tools.

Tools:
Excel, SQL, Python, Tableau, Power BI, Google Sheets

✅ ROUND 1: Aptitude + Data Interpretation + English

📌 What's Tested:

- Basic Math & Logical Reasoning (Averages, DI, Tables)
- Reading Comprehension & Sentence Correction

📚 Resources:

- Aptitude: Indiabix, Testbook, PrepInsta
- Verbal: Word Power Made Easy, Grammarly
- DI: Charts & Graphs section on Indiabix

✅ ROUND 2: SQL + Excel + Python Basics

📌 Topics to Prepare:

SQL:

- SELECT, GROUP BY, HAVING, JOINS, Window Functions

Excel:

- Pivot Tables, VLOOKUP/XLOOKUP, Filters, Dashboards

Python:

- pandas, NumPy, matplotlib basics

🔨 Practice:

- LeetCode SQL Track (100+ questions)
- Kaggle Datasets (Exploratory Analysis)
- ExcelPracticeOnline, SQLZoo

✅ ROUND 3: Visualization and Business Case

- Use Tableau/Power BI to solve case study (e.g., "Sales down in North region")
- Derive KPIs (revenue, churn, etc.)
- Clean data + show storytelling with charts

🎥 Resources:

- YouTube: "Data With Danny", Alex the Analyst
- Projects: Make dashboards on Tableau Public or PowerBI.com

📘 **Final Preparation Tips:**

- Have 2 dashboards on Tableau Public with clean layout

- Make 1 case study PDF (Business Problem → Analysis → Visualization)

- Resume should highlight: SQL, Excel, Data Cleaning, Dashboarding

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🌐 **Where to Apply:**

Platform	Description
LinkedIn	Search "Data Analyst Fresher" daily
Naukri.com	Apply to analyst & MIS roles
Analytics Vidhya Jobs	Special job board for data roles
Internshala	Data internships at startups
Turing, Flexiple	Remote work platforms
Company Portals	HSBC, Accenture, EY, Deloitte

Would you like me to now continue with the rest of the profiles? Here are the next in queue:

- Frontend Developer

- Backend Developer

- Software Developer

- Data Scientist

- Cybersecurity Analyst

- DevOps Engineer

- ML Engineer

- Product Manager

- UI/UX Designer

- Digital Marketing Executive
  ...and so on.

💼 Job Profile 3: Frontend Developer

Role Summary:

Focuses on designing and developing the **user interface** of websites and web apps. Converts UI/UX designs into working websites.

Core Skills:

HTML, CSS, JavaScript, React/Angular/Vue, Responsive Design, UI Frameworks (Bootstrap, Tailwind)

✅ ROUND 1: Aptitude + Verbal + Web Fundamentals

📌 What's Tested:

- Quant (Percentages, Averages, S.I./C.I., Reasoning)

- Verbal (Reading comprehension, grammar)

- Web basics: HTML5, CSS3, JavaScript syntax

🔢 Resources:

- Aptitude: IndiaBix, PrepInsta

- HTML/CSS: FreeCodeCamp, W3Schools

- JavaScript: JavaScript.info, CodeWithHarry

✅ ROUND 2: UI Development Skills Test

📌 Topics to Prepare:

Core:

- HTML5 tags, semantic structure, forms

- CSS Grid, Flexbox, animations

- JavaScript ES6+ (let/const, functions, array methods)

Framework (React Preferred):

- Functional Components, JSX

- React Hooks (useState, useEffect)

- Routing with React Router

- API Integration (fetch, Axios)

Bonus:

- State management (Redux or Context API)

- Tailwind CSS or Bootstrap for UI speed

🔨 **Projects:**

- Responsive Portfolio Website

- Weather App using React & OpenWeather API

- Netflix Clone UI / Blog layout with routing

✅ **ROUND 3: Live Coding + Project Discussion**

- Design-to-code round using a Figma mockup

- Questions on DOM, performance (repaints, throttling)

- Accessibility (a11y), browser compatibility

- Debugging with DevTools

🎥 **Resources:**

- Kevin Powell (YouTube CSS Mastery)

- "Frontend Interview Handbook" GitHub repo

📘 **Final Preparation Tips:**

- Learn to convert any Dribbble UI into working code

- Maintain GitHub repos for all your projects

- Optimize websites (Lighthouse score >90)

🌐 **Where to Apply:**

Platform	Description
LinkedIn	Search "Frontend Developer Fresher"
Naukri.com	Filter for HTML/CSS/React/JS roles
AngelList	Startups hiring UI/UX devs
RemoteOK / WeWorkRemotely	Remote frontend jobs
Internshala	Apply to React internships
Company Pages	BookMyShow, CRED, Zomato, MakeMyTrip

💼 Job Profile 4: Backend Developer

Role Summary:
Works on **server-side logic**, APIs, databases, and system design. Ensures the app functions behind the scenes.

Core Skills:
Node.js, Express, Python (Django/Flask), SQL, REST APIs, MongoDB, Authentication, System Design

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✅ ROUND 1: Aptitude + Verbal + Computer Fundamentals

📌 What's Tested:

- Quant (Time & Work, Pipes & Cisterns, PnC)

- Verbal (Sentence formation, vocab)

- DBMS basics, OS concepts, logic-based coding

📚 Resources:

- Aptitude: RS Aggarwal, Testbook

- DBMS: Gate Smashers, GeeksforGeeks

- OS + Networks: Neso Academy

✅ ROUND 2: API Building + Database Test

📌 Topics to Prepare:

Programming:

- Node.js with Express: Routing, Middleware

- Python Flask (if using Python backend)

- RESTful API design, CRUD, JWT Auth

Database:

- MongoDB: Schemas, Queries, Aggregation

- MySQL/PostgreSQL: Joins, Indexing, Transactions

Bonus:

- File Uploads, Pagination, Email triggers

- Logging & Error Handling

🔨 Projects:

- Authentication System with login/signup

- REST API for blogging or e-commerce backend

- Chat server using WebSockets

✅ **ROUND 3: System Design + Debugging**

- Design endpoints for apps like Instagram or Paytm

- DB Schema design (e.g., user-product-order)

- Rate limiting, Caching, Throttling

- Error tracing, Logs, Deployment awareness

🎥 **Resources:**

- "Backend Simplified" – YouTube

- "Grokking System Design" (Educative.io)

- GitHub Projects: Express + MongoDB Boilerplates

📘 **Final Preparation Tips:**

- Learn Postman for API testing

- Add Swagger (OpenAPI) to document your APIs

- Keep a live API hosted on Render/Railway.app

🌐 **Where to Apply:**

Platform	Description
LinkedIn	Use filters like "Backend Developer" + "Fresher"
Instahyre	Premium backend jobs in startups
Naukri.com	Backend + Node.js/Django filters
AngelList	Apply for early-stage remote backend jobs
Turing / Toptal	Remote backend developer roles (test-based)
Company Careers	Apply to backend roles at Swiggy, CRED, Meesho, Razorpay

💼 Job Profile 5: DevOps Engineer

Role Summary:
Automates deployment, manages CI/CD pipelines, cloud infrastructure, and ensures systems run efficiently and securely.

Core Tools:
Linux, Git, Docker, Jenkins, Kubernetes, AWS/GCP, Terraform, Ansible

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✅ ROUND 1: Aptitude + Linux + Networking Basics

📌 What's Tested:

- Aptitude + Reasoning (basic)

- Shell commands (ls, chmod, ps, grep, etc.)

- Computer networks (OSI, TCP/IP, ports, firewalls)

📚 Resources:

- Linux: [Linux Journey](#), OverTheWire

- Networks: Neso Academy (YouTube)

- Aptitude: IndiaBix, RS Aggarwal

✅ ROUND 2: DevOps Tools & Automation

📌 Topics to Prepare:

- Git & GitHub basics, branching, merge conflicts

- Docker (images, containers, volumes, networking)

- CI/CD pipelines using Jenkins, GitHub Actions

- YAML scripting

🔨 Projects:

- Dockerized To-do App with CI/CD pipeline

- GitHub Actions pipeline for automatic deployment

- Nginx reverse proxy setup with load balancing

✅ ROUND 3: Cloud + Infrastructure as Code (IaC)

📌 Topics:

- AWS: EC2, S3, IAM, VPC

- Terraform (init, apply, variables, modules)

- Kubernetes (pods, deployments, services)

- Monitoring & logging (Prometheus, Grafana)

🎥 **Resources:**

- YouTube: TechWorld with Nana, FreeCodeCamp AWS bootcamp

- Courses: "Docker + Kubernetes" by Bret Fisher, AWS Cloud Practitioner on Coursera

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📘 **Final Preparation Tips:**

- Build a GitHub repo with end-to-end pipeline examples

- Learn to debug logs, analyze errors, and rollback deployments

- Highlight IaC experience in resume

🌐 **Where to Apply:**

Platform	Description
LinkedIn	Search "DevOps Engineer Fresher" or "Intern"
Naukri.com	Filter by Docker, AWS, Jenkins tags
Instahyre	DevOps roles in startups + fintech
Turing, Remotive	Remote DevOps engineer jobs
AWS re/Start	AWS-backed free certification + placement
Company Portals	Apply to DevOps Internships at Razorpay, CRED, TCS Digital

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💼 Job Profile 6: Data Scientist

Role Summary:
Works with large datasets to extract insights using statistics, programming, and machine learning techniques.

Core Tools:
Python, pandas, NumPy, SQL, matplotlib/seaborn, scikit-learn, Tableau, Power BI

✅ **ROUND 1: Aptitude + Statistics + SQL**

📌 **What's Tested:**

- Probability, combinatorics, statistics (mean, std dev, distributions)

- SQL queries: SELECT, JOIN, GROUP BY, subqueries

🗂️ Resources:

- Stats: Khan Academy (Statistics), 365 Data Science

- SQL: LeetCode SQL track, Mode Analytics SQL tutorial

✅ ROUND 2: Python Programming + EDA

📌 Topics:

- pandas, NumPy, DataFrames, cleaning

- Exploratory Data Analysis (EDA) using seaborn/matplotlib

- Feature engineering

⛏️ Projects:

- Sales Data Analysis using pandas

- EDA on Kaggle Titanic Dataset

- Power BI dashboard on e-commerce data

✅ ROUND 3: Predictive Modeling + Visualization

📌 Topics:

- Regression, classification (logistic, decision trees)

- Model Evaluation (accuracy, F1-score, ROC)

- Visualization tools: Tableau/Power BI

🎥 Resources:

- "Data with Danny" (YouTube), Krish Naik tutorials

- Kaggle (build 5+ notebooks, participate in competitions)

- Coursera: IBM Data Science Certificate

📘 Final Preparation Tips:

- Keep 2 complete case studies in your portfolio

- Make a Tableau Public profile with dashboards

- Resume keywords: "predictive model," "EDA," "KPI dashboards"

🌐 **Where to Apply:**

Platform	Description
LinkedIn	Search "Data Scientist – Entry Level"
Analytics Vidhya Jobs	Specialized data science job board
Kaggle	Collaborate and share projects
Internshala	Data internships with PPO chances
Turing, RemoteOK	Remote analyst roles
Company Careers	Deloitte, EY, ZS Associates, Fractal Analytics

💼 Job Profile 7: Machine Learning Engineer

Role Summary:
Builds, trains, deploys, and optimizes ML models. Focused on the production-level implementation of AI systems.

Core Tools:
Python, scikit-learn, TensorFlow/PyTorch, pandas, NumPy, Flask/FastAPI, MLflow

✅ **ROUND 1: Aptitude + Math + Programming**

📌 **What's Tested:**

- Linear algebra, calculus, probability
- Python (loops, functions, NumPy)
- Logic-based coding questions

📊 **Resources:**

- Math: 3Blue1Brown YouTube (linear algebra, calculus)
- Python: HackerRank Python track
- Books: "Python Machine Learning" by Sebastian Raschka

✅ **ROUND 2: ML Algorithms + Model Building**

📌 **Topics:**

- Supervised Learning (regression, SVM, decision trees)

- Unsupervised Learning (K-means, PCA)

- Evaluation Metrics (confusion matrix, AUC, precision-recall)

- Feature selection, cross-validation

🔨 **Projects:**

- Spam Email Classifier

- House Price Prediction Model

- Facial Recognition using OpenCV + SVM

✅ **ROUND 3: Model Deployment + System Design**

📌 **Topics:**

- Deploy ML model using Flask/FastAPI

- Use Docker for model containerization

- ML pipelines (Airflow basics, batch processing)

- Basics of GPU, training optimization

🎥 **Resources:**

- YouTube: Krish Naik, Sentdex

- FastAPI + MLflow tutorials on GitHub

- Book: "Machine Learning Engineering" by Andriy Burkov

📘 **Final Preparation Tips:**

- 1 end-to-end deployed ML project (host on HuggingFace, Render, etc.)

- Resume keywords: "model deployment," "TensorFlow," "ML pipelines"

- Maintain clean Jupyter notebooks with visualizations + explanations

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🌐 **Where to Apply:**

Platform	Description
LinkedIn	"ML Engineer – Fresher" jobs
HuggingFace Jobs	Open-source ML jobs
Internshala	AI/ML internships with PPO option

Platform	Description
Naukri.com	Apply to roles with keywords "TensorFlow," "ML model"
Turing / Flexiple	Remote AI/ML engineer roles
Company Sites	Apply to Google AI, TCS Research, Bosch AI, DRDO AI labs

💼 Job Profile 8: AI Engineer

Role Summary:
Designs and develops intelligent systems that mimic human behavior using deep learning, NLP, computer vision, and reasoning algorithms.

Core Tools:
Python, TensorFlow, PyTorch, OpenCV, Hugging Face, Transformers, FastAPI, LangChain, MLflow

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✅ **ROUND 1: Aptitude + Math + Programming**

📌 **What's Tested:**

- Linear algebra (vectors, matrices), probability, calculus

- Python basics (functions, OOPs, NumPy, pandas)

- Logic-based problem solving

📚 **Resources:**

- Math: 3Blue1Brown (YouTube), Khan Academy (Linear Algebra)

- Python: HackerRank Python track, W3Schools

- Book: "Deep Learning with Python" by François Chollet

✅ **ROUND 2: Deep Learning + NLP + CV**

📌 **Topics:**

- Deep Neural Networks, CNNs, RNNs, LSTMs

- Transformers (BERT, GPT), Hugging Face pipelines

- OpenCV: Image pre-processing, face detection

- Word embeddings (Word2Vec, GloVe), attention mechanisms

🔨 **Projects:**

- Chatbot using Hugging Face Transformers

- Real-time Face Mask Detection

- Text Summarizer using BERT

✅ **ROUND 3: Model Deployment + LLM Integration**

📌 **Topics:**

- Deploy models using FastAPI + Docker

- LangChain, vector DBs (FAISS, Pinecone)

- LLM APIs (OpenAI, Cohere)

- CI/CD for AI models (MLflow, DVC)

🎥 **Resources:**

- YouTube: Krish Naik, Patrick Loeber, AssemblyAI

- Hugging Face Course: https://huggingface.co/course

- DeepLearning.AI Specializations (Coursera)

📘 **Final Preparation Tips:**

- Maintain a GitHub profile with multiple AI apps

- Build 1 complete end-to-end GenAI project (chatbot, image generator)

- Resume keywords: "transformers," "LLM integration," "FastAPI deployment"

🌐 **Where to Apply:**

Platform	Description
LinkedIn	Search "AI Engineer Entry-Level / Intern"
Hugging Face Jobs	Jobs focused on open-source AI / LLM work
Naukri / Instahyre	Filter by TensorFlow, GPT, AI projects
Turing, Remotive	Remote GenAI and AI Engineer jobs
OpenAI / Cohere / Anthropic	Career pages for GenAI-focused roles
Company Portals	Apply to AI roles at Google AI, Microsoft, Adobe, Zoho

💼 Job Profile 9: Cybersecurity Analyst / Engineer

Role Summary:
Protects systems and networks from cyber threats using tools for monitoring, analysis, and risk mitigation. Investigates breaches, enforces security policies.

Core Tools:
Kali Linux, Wireshark, Burp Suite, Nessus, Metasploit, Splunk, Snort, Nmap

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✅ ROUND 1: Aptitude + Networking + Security Basics

📌 What's Tested:

- OSI/TCP-IP model, subnets, ports, firewalls

- Basic encryption: hashing, SSL/TLS

- Threats: phishing, malware, DoS, brute force

📒 Resources:

- Networks: Neso Academy (YouTube), Cisco NetAcad

- Security Basics: Cybrary, Professor Messer (YouTube)

- Aptitude: RS Aggarwal, IndiaBix

✅ ROUND 2: Tools + Vulnerability Analysis

📌 Topics:

- Nmap, Wireshark: Packet analysis

- OWASP Top 10: SQLi, XSS, CSRF

- Burp Suite: Web app pentesting basics

- Log analysis (Splunk), SIEM tools

🔨 Projects:

- Vulnerability scanning using Nessus

- Analyze logs and detect anomalies

- Basic Capture The Flag (CTF) challenges

✅ ROUND 3: Advanced Security + Certifications

📌 Topics:

- Penetration testing with Metasploit

- Linux hardening, firewalls (iptables, ufw)

- SOC analyst tasks: SIEM, incident response

- Certifications: CEH, CompTIA Security+, OSCP (for advanced)

🎥 **Resources:**

- TryHackMe & HackTheBox (Hands-on labs)

- YouTube: The Cyber Mentor, John Hammond

- Books: "The Web Application Hacker's Handbook," "Hacking: The Art of Exploitation"

📘 **Final Preparation Tips:**

- Maintain a TryHackMe/HackTheBox profile

- Resume keywords: "OWASP Top 10," "log analysis," "SIEM tools"

- Mention certification progress (CEH, CompTIA) even if ongoing

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🌐 **Where to Apply:**

Platform	Description
LinkedIn	Search "Cybersecurity Analyst – Fresher/Intern"
TryHackMe Careers	Join their partner hiring network
Internshala	Internships at small firms & MSPs
Naukri, Instahyre	Use keywords like "Security Analyst," "VAPT," "SOC"
Turing / HackerOne	Remote bug bounty/security engineering gigs
Company Careers	Infosys Cyber Defense, KPMG, Deloitte, Palo Alto Networks

💼 Job Profile 10: Blockchain Developer

Role Summary:
Develops decentralized applications (dApps), smart contracts, and secure blockchain systems using technologies like Ethereum and Solidity.

Core Tools:
Solidity, Ethereum, Web3.js, Hardhat, Ganache, Metamask, Truffle, IPFS, Remix IDE

✅ ROUND 1: Aptitude + Programming + Crypto Basics

📌 **What's Tested:**

- Logic-building, DSA (basic)

- Cryptographic hashing, public-private keys, consensus mechanisms

- Basic programming in JavaScript/Python

🗂️ **Resources:**

- Cryptography Basics: Khan Academy, "CryptoZombies" (interactive)

- JS: freeCodeCamp, JavaScript.info

- Aptitude: HackerRank, IndiaBix

✅ ROUND 2: Smart Contracts + Ethereum + dApps

📌 **Topics:**

- Solidity: data types, functions, modifiers, inheritance

- Deploy contracts via Remix IDE & Truffle

- Gas, transactions, Metamask integration

🔨 **Projects:**

- Voting System Smart Contract

- Token (ERC-20) on Ethereum testnet

- NFT minting site using Web3.js + IPFS

✅ ROUND 3: Advanced Web3 + Security + Deployment

📌 **Topics:**

- Web3.js + Frontend (React) for dApp integration

- Security: Reentrancy, Integer overflow, Front-running

- IPFS for file storage, smart contract testing (Hardhat)

🎥 **Resources:**

- YouTube: Patrick Collins (Full Blockchain Dev), EatTheBlocks

- Courses: ChainShot, Buildspace, Alchemy University (Free)

- Books: "Mastering Ethereum" by Andreas Antonopoulos

📘 **Final Preparation Tips:**

- Build a portfolio with 2–3 smart contract projects

- Host frontend on Vercel + link to testnet smart contracts

- Resume keywords: "Solidity," "ERC-20," "dApp," "Web3.js"

🌐 **Where to Apply:**

Platform	Description
LinkedIn	Search "Blockchain Developer Intern/Fresher"
CryptoJobs	Web3-focused job board
Revelo / RemoteOK	Remote jobs in dApps and DeFi
AngelList / Wellfound	Blockchain startups hiring interns
Company Portals	Polygon, CoinDCX, WazirX, ConsenSys

💼 Job Profile 11: Game Developer

Role Summary:
Designs and programs interactive games for mobile, PC, or console platforms using engines like Unity or Unreal.

Core Tools:
Unity, C#, Unreal Engine, Blender, Git, Visual Studio, Photon Engine, Godot

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✅ **ROUND 1: Aptitude + OOPs + Game Math**

📌 **What's Tested:**

- Math for games: vectors, physics, collision

- OOPs concepts in C++/C#

- Logical thinking and basic 2D game flow

📚 **Resources:**

- Unity Learn (Free tutorials)

- Brackeys (YouTube), GameDev.tv

- Khan Academy: Physics (Forces, Motion)

✅ **ROUND 2: Game Engine + Scripting + Animation**

📌 **Topics:**

- Unity (Scenes, Prefabs, Rigidbody, Animator)

- Scripting in C# (Events, Input, Collisions)

- Level design, basic enemy AI

🔨 **Projects:**

- 2D platformer with score system

- First-person shooter with health + ammo UI

- Multiplayer tic-tac-toe using Photon Engine

✅ **ROUND 3: Game Optimization + Deployment**

📌 **Topics:**

- Memory management, object pooling

- Game build for Android/WebGL

- Unity Analytics, Ads integration, Play Store publishing

🎥 **Resources:**

- YouTube: Brackeys, Blackthornprod

- Udemy: "Complete C# Unity Developer"

- GitHub: Unity open-source game templates

📘 **Final Preparation Tips:**

- Make 2-3 polished mini-games and upload to Itch.io

- Resume keywords: "Unity C#," "2D/3D game," "animation," "FPS controller"

- Create gameplay trailer videos to attach in portfolio

🌐 **Where to Apply:**

Platform	Description
LinkedIn	Game dev internships & Unity developer jobs
IndieHackers	For indie game studio gigs

Platform	Description
Internshala	Game design internships with PPO
GameDevJobs.io	International gaming jobs
Company Careers	Ubisoft, Gameloft, Nazara, Hyperlink InfoSystem

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💼 Job Profile 12: Mobile App Developer

Role Summary:
Designs and builds mobile applications for Android and iOS platforms using native and cross-platform tools.

Core Tools:
Flutter, Dart, React Native, Android Studio, Firebase, Kotlin, Swift, REST APIs

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✅ ROUND 1: DSA + OOPs + App Logic

📌 What's Tested:

- Basic logic and data structures (arrays, maps, recursion)
- OOPs in Dart/Java/Kotlin
- App flow understanding, UI widgets

📚 Resources:

- Flutter Docs + YouTube (The Net Ninja, CodeWithAndrea)
- DSA: Love Babbar sheet, GeeksforGeeks
- Kotlin: JetBrains Academy

✅ ROUND 2: UI + State Management + APIs

📌 Topics:

- Flutter: Stateless/Stateful widgets, routes, themes
- REST API integration using http or dio
- State management (Provider, Riverpod, Bloc)

🔨 Projects:

- To-do List app with local storage
- Weather app using OpenWeather API

- Chat UI with real-time updates (Firebase)

✅ ROUND 3: Firebase + Deployment + Performance

📌 Topics:

- Firebase Auth, Firestore, Push Notifications

- App deployment to Play Store (Flutter build, keystore)

- Optimization (lazy loading, null safety, responsiveness)

🎥 Resources:

- YouTube: Reso Coder, FlutterFlow, MTechViral

- Courses: AppBrewery Flutter Bootcamp, CodeWithHarry Flutter series

- Docs: Official Flutter Firebase integration guide

📘 Final Preparation Tips:

- Publish at least 1 app on Play Store

- Showcase projects on GitHub + video demos on YouTube

- Resume keywords: "Flutter," "Firebase," "state management," "REST API"

🌐 Where to Apply:

Platform	Description
LinkedIn	"Flutter Developer Intern" or "Mobile Developer – Fresher"
Internshala	App development internships with real-world projects
Turing / Remotive	Remote Flutter or React Native jobs
Naukri / CutShort	Mobile dev jobs filtered by tech (Flutter, Android)
Company Careers	Apply at Swiggy, Zomato, Ola, Razorpay, PhonePe

💼 Job Profile 13: Cloud Engineer

Role Summary:
Designs, builds, and manages cloud infrastructure and services using platforms like AWS, Azure, or GCP. Ensures scalability, security, and cost-efficiency.

Core Tools:
AWS, Azure, GCP, Terraform, Ansible, Docker, Kubernetes, CI/CD, Linux, CloudWatch

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✅ ROUND 1: Aptitude + Networking + Linux Basics

📌 What's Tested:

- Aptitude + logical reasoning

- Networking concepts: Subnets, IPs, DNS, Load Balancing

- Linux: shell scripting, process management, file permissions

📚 Resources:

- Networking: Neso Academy, AWS Whitepapers

- Linux: Linux Journey, OverTheWire Bandit

- Aptitude: IndiaBix, RS Aggarwal

✅ ROUND 2: Cloud Platform (AWS/Azure/GCP) + DevOps Tools

📌 Topics:

- Cloud: EC2, S3, IAM, VPC, Lambda, CloudFront (AWS examples)

- Infrastructure as Code: Terraform basics

- CI/CD pipelines: Jenkins, GitHub Actions, GitLab CI

🔨 Projects:

- Auto-deploy web app on AWS using Terraform

- CI/CD pipeline for serverless app

- Setup a cloud-based logging & monitoring system

✅ ROUND 3: Monitoring + Security + Cost Optimization

📌 Topics:

- Monitoring: CloudWatch, Prometheus, Grafana

- Identity & Access Management (IAM)

- Cost calculators, reserved vs spot instances

- Kubernetes on cloud (EKS, GKE)

🎥 **Resources:**

- YouTube: TechWorld with Nana, FreeCodeCamp AWS Course

- Coursera: "AWS Certified Solutions Architect" by Andrew Brown

- Books: "Cloud Engineering with Google Cloud" by Oliver J.

📘 **Final Preparation Tips:**

- Make a project repo with multi-service cloud architecture

- Highlight cost-efficient and scalable design in resume

- Resume keywords: "Terraform," "cloud-native," "CI/CD," "IAM," "EC2"

🌐 **Where to Apply:**

Platform	Description
LinkedIn	"Cloud Engineer Intern / Fresher" jobs
Naukri, Instahyre	Filter by AWS, Azure, DevOps
AWS re/Start	Free training + job placement for cloud roles
Turing / Flexiple	Remote cloud infra jobs
Company Portals	Apply to Infosys, Accenture, Zoho, Oracle, Google Cloud

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💼 Job Profile 14: Embedded Systems Engineer

Role Summary:
Builds hardware-software integrated systems using low-level programming for devices like microcontrollers, IoT, and robotics.

Core Tools:
C/C++, ARM, AVR, RTOS, STM32, Arduino, Raspberry Pi, UART, I2C, SPI, Keil, MPLAB

✅ **ROUND 1: Aptitude + Electronics + C Programming**

📌 **What's Tested:**

- Digital electronics (logic gates, flip flops)

- C/C++ basics, pointers, memory management

- Embedded MCQs (registers, interrupts)

📚 **Resources:**

- C Language: GeeksforGeeks C track, LetUsC

- Digital: Neso Academy, All About Circuits

- Books: "Embedded C" by Michael J. Pont

✅ **ROUND 2: Microcontrollers + Protocols + Embedded Linux**

📌 **Topics:**

- ARM/AVR architecture, timers, GPIO

- Communication: UART, I2C, SPI

- Real-time OS (RTOS), interrupts, bootloader

- Embedded Linux: cross-compilation, device drivers

🔨 **Projects:**

- Line-following robot using Arduino

- Home automation system with Raspberry Pi

- Sensor data logger using STM32

✅ **ROUND 3: Debugging + Power Optimization + Deployment**

📌 **Topics:**

- JTAG, Serial debugging, Logic analyzers

- Power-efficient design techniques

- Firmware upgrade over-the-air (OTA)

- PCB design basics (KiCad, Eagle)

🎥 **Resources:**

- YouTube: Shawn Hymel, Phil's Lab

- Courses: Embedded Systems - Coursera by University of Colorado

- Simulator: Proteus, TinkerCAD

📘 **Final Preparation Tips:**

- Build 2 projects with real sensors + control logic

- Resume keywords: "interrupts," "embedded C," "UART/SPI/I2C," "RTOS"

- Mention knowledge of firmware + real-time systems

🌐 **Where to Apply:**

Platform	Description
LinkedIn	"Embedded Systems Intern / Fresher"
Naukri / CutShort	Embedded C jobs in electronics/IoT firms
Turing / Toptal	Freelance firmware development roles
Internshala	Embedded internships with microcontroller projects
Company Portals	Bosch, Qualcomm, STMicroelectronics, Havells, L&T

💼 Job Profile 15: Site Reliability Engineer (SRE)

Role Summary:
Ensures system reliability and uptime by combining software engineering with IT operations. Automates incident responses, monitors systems, and manages SLAs.

Core Tools:
Linux, Prometheus, Grafana, Docker, Kubernetes, Terraform, Go/Python, Ansible, ELK Stack

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✅ **ROUND 1: Aptitude + Linux + Networking**

📌 **What's Tested:**

- Linux shell scripting, systemd, process management

- OSI/TCP-IP model, DNS, latency, firewall, load balancing

- Problem-solving + basic coding

📚 **Resources:**

- Linux: OverTheWire, Linux Journey

- Networking: Neso Academy, Cisco Packet Tracer

- Aptitude: HackerRank, IndiaBix

✅ **ROUND 2: Monitoring + Automation + Incident Management**

📌 **Topics:**

- Monitoring: Prometheus, Grafana

- Log management: ELK Stack, Splunk

- SLA/SLO/SLI concepts

- Cron jobs, uptime checks, alert systems

🔨 **Projects:**

- Alerting system with Prometheus + Grafana

- Downtime incident auto-reporter

- Log parser with visualization dashboard

✅ **ROUND 3: CI/CD + Infrastructure + Resilience Testing**

📌 **Topics:**

- CI/CD pipelines (GitHub Actions, Jenkins)

- Chaos Engineering (Gremlin, Litmus)

- Infrastructure as Code: Terraform, Ansible

- K8s auto-scaling, load balancing, failover systems

🎥 **Resources:**

- YouTube: TechWorld with Nana (SRE Series), Google SRE talks

- Book: "Site Reliability Engineering" by Google

- Courses: Udacity - SRE Nanodegree, Coursera DevOps

📘 **Final Preparation Tips:**

- Practice incident response simulation projects

- Resume keywords: "SRE," "uptime monitoring," "SLI/SLO," "Kubernetes," "Grafana"

- Emphasize logs, auto-healing, and rollback systems in portfolio

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🌐 **Where to Apply:**

Platform	Description
LinkedIn	"Site Reliability Engineer – Entry Level"
Naukri / Instahyre	Use filters like Prometheus, Terraform, Kubernetes

Platform	Description
Turing, Flexiple	Remote SRE gigs in global startups
GCP / AWS Job Boards	Google/AWS often hire SREs via partner portals
Company Portals	Google SRE, Flipkart, Paytm, Ola, Razorpay

💼 Job Profile 16: Database Administrator (DBA)

Role Summary:
Manages, secures, and optimizes databases to ensure fast, reliable access to data for applications and users.

Core Tools:
SQL, MySQL, PostgreSQL, Oracle DB, MongoDB, pgAdmin, phpMyAdmin, DBMS, Shell scripting, Backup tools

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✅ ROUND 1: Aptitude + DBMS + SQL

📌 **What's Tested:**

- Database concepts (ACID, Normalization, Indexing)
- SQL queries: JOINs, GROUP BY, subqueries
- Logical reasoning and analytical thinking

📚 **Resources:**

- DBMS: Gate Smashers (YouTube), Neso Academy
- SQL: LeetCode SQL, W3Schools SQL, Mode Analytics
- Aptitude: IndiaBix, RS Aggarwal

✅ ROUND 2: Database Design + Backup & Recovery

📌 **Topics:**

- Database schema design, E-R diagrams
- Backup and recovery strategies (cold/hot backup)
- User access control and roles

- Stored procedures, triggers, transactions

🔨 **Projects:**

- Employee Management System in MySQL/PostgreSQL

- Sales tracking dashboard with data logs

- Automatic daily backup using cron jobs and shell scripts

✅ **ROUND 3: Optimization + Monitoring + NoSQL**

📌 **Topics:**

- Query optimization (EXPLAIN, indexing strategies)

- Monitoring with tools like pgAdmin or Oracle AWR

- NoSQL basics: MongoDB, key-value stores

- High availability and replication

🎥 **Resources:**

- YouTube: Telusko (SQL & DBMS), TechTFQ (DBA-specific)

- Courses: Coursera - Oracle DB Admin, MongoDB University

- Books: "SQL Performance Explained," "Database System Concepts"

📘 **Final Preparation Tips:**

- Build 2 real-world relational DB projects with admin tools

- Resume keywords: "SQL optimization," "backup recovery," "user access control," "replication"

- Maintain GitHub with SQL scripts, ER diagrams, and setup guides

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🌐 **Where to Apply:**

Platform	Description
LinkedIn	"Database Admin / SQL Intern / Fresher" roles
Naukri / Instahyre	Use filters for Oracle, PostgreSQL, MySQL, MongoDB
Internshala	Admin & SQL internships in ERP/software firms
RemoteOK / Turing	Remote roles for MySQL, MongoDB management
Company Portals	TCS, Infosys, Zoho, Oracle, IBM, Dell EMC

💼 Job Profile 17: QA Engineer / Automation Tester

Role Summary:
Tests software manually and through automated scripts to ensure it meets quality standards and functions without bugs.

Core Tools:
Selenium, Java/Python, TestNG, JUnit, Postman, Jenkins, Cucumber, Playwright, JIRA

✅ ROUND 1: Aptitude + SDLC + Manual Testing

📌 **What's Tested:**

- STLC, SDLC, testing types (functional, regression, smoke)
- Test case writing, bug lifecycle
- Aptitude and basic logic reasoning

📚 **Resources:**

- Manual Testing: Guru99, Let's Test
- YouTube: The Testing Academy, Software Testing Help
- Aptitude: IndiaBix, HackerRank Logical

✅ ROUND 2: Automation Tools + Scripting

📌 **Topics:**

- Selenium WebDriver (Java or Python)
- TestNG/JUnit for assertions and test reports
- API Testing: Postman basics
- Writing automated test cases, XPath locators

🔨 **Projects:**

- Automate login + signup forms using Selenium
- End-to-end testing for e-commerce checkout flow
- API test suite for CRUD operations (Postman)

✅ ROUND 3: CI/CD Integration + Reporting

📌 **Topics:**

- Automation pipelines in Jenkins/GitHub Actions

- Report generation: Allure, Extent Reports

- Cucumber with BDD (Given-When-Then format)

- Performance & load testing basics (JMeter)

🎥 **Resources:**

- YouTube: Naveen AutomationLabs, QAFox

- Courses: Udemy - Selenium WebDriver with Java/Python

- Tools: Try Playwright or Cypress for modern JS-based automation

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📘 **Final Preparation Tips:**

- Create a GitHub repo with test scripts and test reports

- Resume keywords: "Selenium," "TestNG," "Postman," "bug lifecycle," "JIRA"

- Mention % of test coverage and defects found in projects

🌐 **Where to Apply:**

Platform	Description
LinkedIn	"QA / Automation Tester – Fresher" jobs
Naukri / Instahyre	Use filters for Selenium, JIRA, Postman
Internshala	Testing internships with stipend + PPO
Turing / RemoteOK	Remote QA/Automation roles
Company Portals	TCS, Cognizant, Capgemini, Accenture, BrowserStack

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💼 Job Profile 18: AR/VR Developer

Role Summary:
Creates immersive Augmented and Virtual Reality experiences using engines like Unity with ARKit/ARCore or Oculus SDK.

Core Tools:
Unity, C#, ARKit, ARCore, Vuforia, Blender, Oculus SDK, WebXR, Unreal Engine, XR Plugin Toolkit

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✅ **ROUND 1: Math + OOPs + Game Engine Basics**

📌 **What's Tested:**

- 3D math: vectors, matrices, rotation, raycasting

- OOPs in C# or C++

- Unity basics: GameObjects, Prefabs, Scene Management

🗂️ **Resources:**

- Unity Learn Platform (Official)

- YouTube: Brackeys, Justin P Barnett, Dilmer Valecillos

- Blender for 3D design basics

✅ **ROUND 2: AR/VR SDKs + Interaction Design**

📌 **Topics:**

- Unity XR Toolkit, ARFoundation (for cross-platform AR)

- Oculus or HTC Vive SDK integration

- Gesture interaction, object placement, plane detection

- UI in VR: gaze-based controls, teleportation

🔨 **Projects:**

- AR furniture app (virtual object placement)

- VR museum tour with teleport + UI controls

- AR image recognition game using Vuforia

✅ **ROUND 3: Performance + Deployment + Publishing**

📌 **Topics:**

- App optimization (draw calls, occlusion, batching)

- Build deployment for Android/iOS, Oculus, WebXR

- VR controllers mapping, physics-based interaction

- Publish to Play Store or Oculus Store

🎥 **Resources:**

- YouTube: Circuit Stream, XR Development with Unity

- Courses: Coursera - Meta AR/VR Specialization, Unity AR/VR bootcamp

- Docs: ARKit, ARCore, XR Toolkit on Unity Docs

📘 **Final Preparation Tips:**

- Publish 2 immersive projects (host APK or Oculus build)

- Resume keywords: "ARKit," "Oculus SDK," "XR Plugin," "Unity C#"

- Showcase demo videos + GitHub source code in your portfolio

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🌐 **Where to Apply:**

Platform	Description
LinkedIn	"AR Developer / VR Developer – Intern / Fresher"
Internshala	Startups offering XR-based internships
Turing / RemoteOK	Remote AR/VR development gigs
Unity Connect	AR/VR focused freelance projects
Company Careers	Niantic, Qualcomm, Adobe Aero, Infosys, XR Labs

Platform	Description

💼 Job Profile 19: Software Developer / Engineer

Builds websites, applications, tools, and backend services using languages like Java, Python, C++, or JavaScript. Hired by IT companies, startups, and product-based firms.

✅ ROUND 1: Aptitude + Verbal Ability + Core Subjects (Seasoning Round)

🔍 What You'll Be Tested On:

1. Aptitude (Quantitative + Logical Reasoning)

2. Verbal Ability (Grammar, comprehension, vocabulary)

3. Engineering Subjects (30 core subjects like DBMS, OS, etc.)

Platform	Description

📘 **Preparation Strategy:**

🧠 **Aptitude:**

Topics: Percentages, Time & Work, Profit & Loss, Averages, Speed-Time-Distance, Probability, P&C, Number Series, and Logical puzzles.

Resources:

IndiaBix

RS Aggarwal (Quantitative Aptitude Book)

PrepInsta

Testbook App

📖 **Verbal Ability:**

Topics: Reading Comprehension, Sentence Correction, Para Jumbles, Synonyms-Antonyms

Resources:

Word Power Made Easy (Book)

Platform	Description
Grammarly (for writing practice)	
Testbook, PrepInsta (Verbal practice)	

💡 **Technical Core Subjects (30):**

Includes:

DBMS, Operating Systems, Computer Networks, Software Engineering, OOPs, CN, DLD

Platforms:

YouTube: Gate Smashers, Neso Academy

Articles: GeeksforGeeks, TutorialsPoint

> Tip: Practice mock tests and previous year papers from Infosys, Wipro, TCS, Cognizant, etc.

Platform	Description

✅ **ROUND 2: Programming Languages + DSA (Coding Round)**

💻 **Choose any one programming language:**

C++

Java

Python

📚 **Language Concepts:**

Basics: Variables, Loops, Functions

Object-Oriented Programming:

Inheritance, Encapsulation, Polymorphism, Abstraction

Exception Handling, File I/O

🔧 **Data Structures & Algorithms Topics:**

Category	Topics

Platform	Description
Basic	Arrays, Strings, Time & Space Complexity
Linear DS	Linked Lists, Stacks, Queues
Non-linear DS	Trees, Binary Search Tree, Tree Traversals, Graphs
Algorithms	Searching, Sorting (Merge, Quick, Heap), Recursion, Backtracking
Advanced	Hashing, Dynamic Programming (LCS, 0/1 Knapsack), Greedy, Sliding Window
Miscellaneous	Bit Manipulation, Two-pointer Technique, Divide and Conquer

🧪 Practice Platforms:

LeetCode: Ideal for DSA practice and interview-level questions

HackerRank: Learn basic syntax and solve challenges

InterviewBit: Structured topic-wise coding

Codeforces: For competitive-level problem solving

> Tip: Practice 200–300 questions from LeetCode, and focus on writing optimal code.

Platform	Description

🌐 **Where to Apply for This Job Profile**

Platform	Purpose / Speciality
LinkedIn	Follow company pages and apply directly to openings
Naukri.com	Use filters like "Fresher" + "Software Developer"
Instahyre	Premium jobs in startups and top companies
TCS NQT	National-level test for TCS and partner companies
HackerRank Jobs	Skill-based developer roles
Google Careers	Apply directly for roles at Google
Microsoft Careers	Apply to Microsoft and track openings
AngelList	Jobs in early-stage startups (especially remote)
Indeed	General job listing with fresher-friendly options

🎯 **Final Tips**

Master one programming language in depth (C++/Java/Python)

Build 1-2 strong projects and upload them on GitHub

Create a clean, one-page resume highlighting tech stack and achievements

Be confident during HR rounds and mock interviews