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## Plan Of Action/ Mindset

### Category of Jobs Beginning With:

1. Blockchain Developer
2. Blockchain Architect
3. Blockchain Security Specialist
4. Blockchain Analyst
5. Blockchain Project Manager

### What is the approach?

Segmented Approach. Let's begin by targeting these jobs; We can utilise this plan and the time at hand in order to ensure a good footing into the job market. If we can allocate time from Sem 1 onwards, with a position in mind then it becomes clearer. Tasks and what areas to particularly target in order to secure the said job.

### Why are we using this?

To be able to either get more options based on expertise and experience or be able to find a niche so as to highlight the profile better.

### How to go by using this approach?

The plan is listed below; the plan does not include a cover letter or resumes.

They can be typed out by pasting individual job listings into gpt or bard or copilot and then a customised resume for the same can be made from the base CV.

The AI is also able to understand shortcomings, make it ATS friendly, and make the resume appealing for each job. We can also modify a cover letter the same way.

### Eg prompt:

*"Please modify the subject's CV according to the Job listing below, Please make it ATS Friendly. Also, showcase what strengths and weaknesses are according to the listing from the subject's CV. Finally, help the subject formulate a cover letter for the same.*

*//SUBJECT CV BELOW*

***[paste CV here]***

*//JOB LISTING BELOW*

***[paste job listing here]***

*//SUBJECT COVER LETTER BELOW*

***[paste cover letter here]"***

^ Now take a call based on the output and sample CV's you can see online for professionals who have applied for the same posting. Also try different AI's to get different results or ask for refinements as you see fit for the role.

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## Blockchain Developer

### Knowledge, Skills, and Abilities (KSA):

1. Programming Languages: Solidity is the primary language for smart contract development on Ethereum, but proficiency in languages like C++, Go, Python & JavaScript is also beneficial.
2. Blockchain Fundamentals: concepts like distributed ledger technology, consensus mechanisms (Proof of Work, Proof of Stake), blockchain architecture, decentralised applications (DApps), etc.
3. Development Frameworks and Tools: development frameworks like Truffle, Remix IDE, and Ganache for smart contract development, testing, and deployment. Foundry as well.
4. Problem-solving Skills: Develop the ability to troubleshoot and debug smart contracts, identify vulnerabilities, and implement secure coding practices. Also do Logic Development and Algo's.
5. Version Control Systems: Git to collaborate on projects, track changes, version control.

### GitHub Projects:

1. Create Personal Projects: Build your own DApps, smart contracts, or blockchain-related tools and applications. *Make your projects open-source to showcase your coding skills and contributions.*
2. Contribute to Existing Projects: Participate in open-source blockchain projects on GitHub. How? Contribute code, fix bugs, or suggest improvements.

### Exposure on Other Platforms:

1. CTF Competitions: Join Capture The Flag competitions focused on blockchain & cryptocurrency security. Must Check out Platforms: Hack The Box, CTF365, and CTFtime.
2. Algorithmic Problem Solving: Must Check out platforms: LeetCode, HackerRank, CodeSignal, CodinGames.

### Most Likely Technologies to Excel in Before the Interview:

1. Solidity: Master Solidity by understanding its syntax, data types, control structures, and best practices for smart contract development.
2. Ethereum: Gain a deep understanding of the Ethereum blockchain platform, its architecture, transaction lifecycle, gas fees, and network congestion.
3. Web3.js or Ethers.js: Learn JavaScript libraries for interacting with Ethereum smart contracts and building user interfaces for DApps.
4. Truffle Suite: Explore Truffle Suite tools for smart contract compilation, deployment, and testing. Also, practice using Truffle commands and utilities to streamline development workflows.

**Estimated Time-frame:**

1. Learning Curve: Depending on your background and learning pace, it may take **6-12 months** to acquire the necessary skills and proficiency in blockchain development.
2. Consistent Practice: Dedicate regular time each week to coding, learning, and building projects. Set realistic goals and milestones to track your progress.

**Estimated Time Spent in Lab and Learning Theory:**

1. Hands-on Lab Work: Allocate at least **20-30 hours per week** for practical coding, project development, and experimentation with blockchain technologies.
2. Theoretical Learning: Spend additional time studying blockchain fundamentals, reading documentation, watching video tutorials, and participating in online courses or workshops.

**Resource Pool to Answer Questions:**

1. Official Documentation: Refer to official documentation provided by blockchain platforms such as Bitcoin, Ethereum, Truffle, and Solidity for information and tutorials.
2. Developer Forums: Ethereum Stack Exchange, Stack Overflow, Github, and Reddit.
3. Question Bank: [1](#)  
Question Bank: [2](#)  
Question Bank: [3](#)  
Question Bank: [4](#)  
Question Bank: [5](#)

**Cheat Sheet for Interviews:**

1. Create a cheat sheet containing key concepts, syntax, and best practices related to Solidity programming, Ethereum development, smart contract security, and blockchain architecture. ([Like this](#))
2. Include common interview questions on topics like smart contract deployment, gas optimization, event handling, error handling, and security considerations. ([Like this](#))

**Sample Job Listing:**

Position: Blockchain Developer

Requirements:

Bachelor's degree in Computer Science, Engineering, or related field preferred.

Proficiency in Solidity, JavaScript, or other programming languages.

Experience with smart contract development and blockchain platforms like Ethereum.

Strong understanding of blockchain architecture, consensus mechanisms, and decentralised applications.

Ability to write clean, efficient, and secure code.

Excellent problem-solving and communication skills.

**Sample Recruiter Message on LinkedIn:**

Subject: Excited to Connect: Blockchain Developer with Strong Smart Contract Experience

Message:

Hi [Recruiter's Name],

I hope this message finds you well. I'm reaching out to express my interest in the Blockchain Developer position at [Company Name]. With a background in Computer Science and

hands-on experience in Solidity development, I have successfully deployed smart contracts for various decentralised applications.

My recent projects include developing [mention specific projects or contributions], where I implemented robust smart contracts to facilitate secure transactions and automate business logic.

I am particularly impressed by [mention something specific about the company or its projects] and believe my skills in blockchain development could contribute significantly to your team's success. I would love the opportunity to discuss how my background aligns with your needs in more detail.

Looking forward to the possibility of working together.

Best regards,

[Your Name]

## Blockchain CHEAT SHEET

### Blocks

A collection of data containing multiple transactions over a given period of time on the blockchain network.

### Chain

The cryptographic link which keeps blocks together using a 'hash' function.

### Blockchain

Blockchain is a decentralized, secure, immutable ledger of chronologically recorded data. It is a chain of blocks that has anonymous individuals as nodes who transact securely using cryptography.

### Peer-To-Peer Network

Every node of the network is a client as well as server, holding identical copies of the application state.

### Cryptography

Use of public key cryptography and cryptographies hash functions: essential for transparency and privacy.

### Game Theory

Nodes of P2P network validates transactions by consensus, following economic incentive mechanism like Proof of Work or Proof of Stake etc.

### Bitcoin

A Peer to Peer Electronic Cash System that would enable people to spend it directly without it going in a financial institution. Blockchain is the technology that runs Bitcoin.

### Coin

A means of payment, act like money - to allow transactions of products and services to occur. Depending on the coin, it is a store of value, unit of account or medium of transfer.

### Token

It is more than just a means of payment. Tokens offer added advantages like voting rights, dividend payouts, access to services and more.

### Decentralised

A system where no individual has ownership of the system and there is no central point of control. Here, the system is spread over the entire network of users.

### Cryptocurrencies

The digital currencies that are secured using cryptography and built using blockchain technology.

### DApps

DApps are 'decentralised applications'. They are applications, like Bitcoin or Ethereum, that are built on a decentralised blockchain.

### Hash

The result of applying an algorithmic function to data in order to convert them into a random string of numbers and letters. This acts as a digital fingerprint of that data, allowing it to be locked in place within the blockchain.

### Digital Signature

A digital code generated by public key encryption that is attached to an electronically transmitted document to verify its contents and the sender's identity.

### Public Address

The cryptographic hash of a public key. They act as email addresses that can be published anywhere, unlike private keys.

### Private Key

A string of data that allows you to access the tokens in a specific wallet. They act as passwords that are kept hidden from anyone but the owner of the address.

### Proof of Stake

A consensus distribution algorithm that rewards earnings based on the number of coins you own or hold. The more you invest in the coin, the more you gain by mining with this protocol.

### Proof of Work

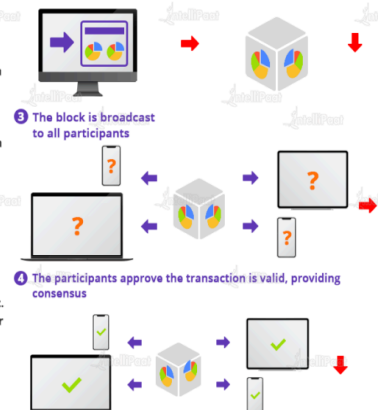
A consensus distribution algorithm that requires an active role in mining data blocks, often consuming resources. The more 'work' you do or the more computational power you provide, the more coins you are rewarded with.

### Node

A copy of the ledger operated by a participant of the blockchain network.

### Blockchain Workflow

- 1 Someone wants to register a transaction
- 2 The transaction is represented as a block in the shared ledger



FURTHERMORE:  
Blockchain Certification Training Course

