

Doctor's War Plan: AI Mentor

retype it

- Level 1: The "Internship Ready" (STATUS: MISSION ACCOMPLISHED
)

Timeline: Original Goal: Jan 2026 | Actual Completion: Dec 2025 Target: Startups, Mid-sized Product Companies.

Linux: You know the basics (ssh, scp, logs). You are polishing the rough edges (Bandit/Linux Survival), but you are functional.

Docker: (User Confirmed) You can write a Dockerfile. You understand building and running containers.

CI/CD: You understand the pipeline flow (Jenkins/GitHub Actions).

Cloud (AWS): You can launch infrastructure.

Kubernetes: You can write a basic deployment (and even more advanced stuff like StatefulSets).

Verdict: You are ready to be hired. If an internship interview happened tomorrow, you would survive the technical round.

🟡 Level 2: The "Junior Engineer" (STATUS: ACTIVE WAR ZONE ✅)

Timeline: Start: Dec 12, 2025 | Deadline: End of 3rd Year Target: Google, Amazon, Atlassian, Remote Startups.

The Vibe: "I can keep it running and secure it."

Linux (Deep): Next Objective. Understanding processes (kill, ps aux), signals, and debugging CPU vs RAM bottlenecks.

Kubernetes (Deep): In Progress. You have touched Ingress and StatefulSets. Now we need to master ConfigMaps, Secrets, and Persistent Volumes so you aren't just copying YAML.

IaC (Terraform): In Progress. You have the resume points. Now we need to practice State Locking and Modules so you can do it blindfolded.

Monitoring: Pending. Setting up Prometheus/Grafana to visualize metrics.

Security: Pending. Secrets Management (Vault/Sealed Secrets).

Verdict: This is where you separate yourself from the "Interns" and become a "Junior Engineer."

🔴 Level 3: The "Architect / Founder" (STATUS: LOCKED 🔒)

Timeline: Target: By Graduation (2028) Target: Founding SwapOS or Senior Roles.

The Vibe: "I can scale it to 1 million users."

Architecture: Load Balancers, Caching (Redis), Kafka.

GitOps: ArgoCD (You have touched this, but mastery takes time).

FinOps: Cutting cloud bills.

Troubleshooting: Debugging distributed system failures.

📋 The "Non-Technical" Assets (STATUS: IN PROGRESS)

The "Financial" Asset (The War Chest):

Goal: ₹2-5 Lakhs.

Status: Searching. You are applying for internships now to fund this.

The "Communication" Asset (The Brand):

Goal: YouTube/Content.

Status: Initiating. You have the "Struggle Documentary" strategy ready.

The "Network" Asset:

Goal: 50 Engineers.

Status: Active. You are the Assistant Cloud Lead.



Here is your updated status report, retyped and formatted for the archives.

● **Level 1: The "Internship Ready" (STATUS: MISSION ACCOMPLISHED ✓)**

Timeline: Original Goal: Jan 2026 | **Actual Completion:** Dec 2025 **Target:** Startups, Mid-sized Product Companies.

- **✓ Linux:** You know the basics (`ssh`, `scp`, logs). You are polishing the rough edges (Bandit/Linux Survival), but you are functional.
- **✓ Docker:** (User Confirmed) You can write a Dockerfile. You understand building and running containers.
- **✓ CI/CD:** You understand the pipeline flow (Jenkins/GitHub Actions).
- **✓ Cloud (AWS):** You can launch infrastructure.
- **✓ Kubernetes:** You can write a basic deployment (and even more advanced stuff like StatefulSets).

Verdict: You are ready to be hired. If an internship interview happened tomorrow, you would survive the technical round.

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Timeline: Start: Dec 12, 2025 | **Deadline:** End of 3rd Year **Target:** Google, Amazon, Atlassian, Remote Startups.

The Vibe: *"I can keep it running and secure it."*

- **Linux (Deep):** Next Objective. Understanding processes (`kill`, `ps aux`), signals, and debugging CPU vs RAM bottlenecks.
- **Kubernetes (Deep):** *In Progress.* You have touched Ingress and StatefulSets. Now we need to master ConfigMaps, Secrets, and Persistent Volumes so you aren't just copying YAML.
- **IaC (Terraform):** *In Progress.* You have the resume points. Now we need to practice State Locking and Modules so you can do it blindfolded.
- **Monitoring:** *Pending.* Setting up Prometheus/Grafana to visualize metrics.
- **Security:** *Pending.* Secrets Management (Vault/Sealed Secrets).

Verdict: This is where you separate yourself from the "Interns" and become a "Junior Engineer."

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- **Architecture:** Load Balancers, Caching (Redis), Kafka.
- **GitOps:** ArgoCD (You have touched this, but mastery takes time).
- **FinOps:** Cutting cloud bills.
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📋 The "Non-Technical" Assets (STATUS: IN PROGRESS)

1. The "Financial" Asset (The War Chest):

- **Goal:** ₹2-5 Lakhs.
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2. The "Communication" Asset (The Brand):

- **Goal:** YouTube/Content.
- **Status:** *Initiating*. You have the "Struggle Documentary" strategy ready.

3. The "Network" Asset:

- **Goal:** 50 Engineers.
- **Status:** *Active*. You are the Assistant Cloud Lead.

include ml,dsa , other things in this plan, make it long detailed and pretty with detailed descriptions of things you ention , make it long pls so it covers everything



This is the **Master Architecture Document (MAD)**.

You asked for the full picture—every gear, every wire, every protocol. This is not just a study plan; it is the operating system for your next 3 years. It integrates **DevOps (Your Career)**, **DSA (The Interview Key)**, and **ML (The Future Weapon)** into a single, cohesive timeline.



THE STARK ROADMAP: 2025 - 2028

Subject: Saarthak Tyagi **Current Status:** Level 2 (In Progress) **Ultimate Goal:** Architect / Founder



LEVEL 1: THE "INTERN READY" (Status: COMPLETED)



Timeline: Finished Dec 2025. **The Vibe:** "*I can follow orders and ship code.*"

You have successfully built the skeleton. You are no longer a "student"—you are a "contributor."

🛠 The Tech Stack (Maintenance Mode)

- **Linux Basics:** You navigate the terminal like home (`ssh`, `grep`, permissions).
- **Docker:** You can containerize applications (Dockerfiles, multi-stage builds).
- **CI/CD:** You understand the "Factory" (GitHub Actions triggers and flows).
- **Cloud (AWS):** You can launch EC2 instances and understand basic networking.
- **Kubernetes (Basic):** You can deploy a stateless app and understand Pods vs. Deployments.

🧠 The "Gatekeeper" Skill: DSA (Foundation)

- **Status:** *Ongoing*.
 - **Objective:** Solve "Easy" and "Medium" problems.
 - **Why:** Even startup internships ask basic array/string questions.
 - **The Stack:** Arrays, Linked Lists, Stacks, Queues.
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🟡 LEVEL 2: THE "JUNIOR ENGINEER" (Status: ACTIVE WAR ZONE ✅)

Timeline: Dec 2025 – End of 3rd Year (May 2027) **Target:** Crack High-Paying Internships (Google, Atlassian, Unicorn Startups). **The Vibe:** "*I don't just run it; I understand it, secure it, and fix it when it breaks.*"

This is your current reality. It is the hardest phase because you are juggling three heavy balls at once.

🛡 1. Advanced DevOps (The Deep Dive)

- **Linux Internals:** Move beyond commands. Understand the Kernel.
 - **What:** Process Management, Signals (SIGKILL vs SIGTERM), File Descriptors, `systemd`.

- *Why:* When a server freezes, you need to know *why*.
- **Kubernetes (The Hard Stuff):**
 - *What:* ConfigMaps, Secrets, Persistent Volumes (PV/PVC), Ingress Controllers, Helm Charts.
 - *Why:* To deploy stateful apps (like Databases) that don't lose data when they crash.
- **IaC (Terraform):**
 - *What:* Managing State Files, Modules, Locking.
 - *Why:* "Clicking" in the AWS console is for amateurs. You write code that builds the cloud.
- **Security (DevSecOps):**
 - *What:* Scanning images (Trivy), Secrets Management (Vault), Network Policies.
 - *Why:* Because a hacked server is a useless server.

✳️ 2. Data Structures & Algorithms (The Interview Key)

- **The Reality:** You cannot get the DevOps job if you fail the coding round.
- **The Grind:**
 - **Trees & Graphs:** BFS, DFS, Shortest Path. (Critical for networking problems).
 - **Dynamic Programming (DP):** The "Boss Level" for interviews.
 - **System Design (Low Level):** Designing classes and object-oriented structures.
- **The Routine:** 1 Problem Daily (LeetCode). No excuses.

🎓 3. College Academics (The Hidden Boost)

- **4th Semester Synergy:**
 - **Operating Systems (OS):** Directly helps with Linux/DevOps.
 - **Computer Networks (CN):** Directly helps with K8s/Docker networking.
 - **DBMS:** Directly helps with Backend/SQL optimization.

- **Strategy:** Don't study for marks. Study to become a better Engineer.
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🔴 LEVEL 3: THE "ARCHITECT" (Status: LOCKED 🔒)

Timeline: 5th Semester (July 2026) – Graduation (2028) **Target:** Senior Roles, Founding "SwapOS", GSoC. **The Vibe:** "*I scale intelligence.*"

This is where you combine your DevOps muscle with the "Brain" of AI.

🤖 1. The Machine Learning Arc (The New Weapon)

- **Start Date:** July 2026 (Summer Break/5th Sem).
- **The Approach:** You are **not** a Data Scientist. You are an **ML Engineer**.
- **The Syllabus:**
 - **Math:** Linear Algebra & Probability (Refresher).
 - **Core ML:** Regression, Classification, Neural Networks.
 - **The "Stark" Twist (MLOps):** You won't just train models. You will build **Pipelines** that train, test, and deploy them automatically using Kubernetes.

🏗 2. High-Level Architecture

- **Distributed Systems:** CAP Theorem, Consistent Hashing, Raft Consensus.
- **Scalability:** Load Balancers (Nginx/HAProxy), Caching Strategies (Redis/Memcached).
- **Event Driven:** Kafka / RabbitMQ.
- **FinOps:** Optimizing cloud costs (Spot Instances, Auto-scaling).

🌐 3. The "Stark Tech" Projects (Convergence)

- **"The Oracle":** A private LLM (Llama 3) running on your own server, orchestrated by K8s, secured by your own VPN.
 - **"Project Genesis AI":** An AI agent that reads your Terraform code and suggests security fixes automatically.
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📋 THE ASSET PORTFOLIO (Side Quests)

While you level up your skills, you must accumulate resources.

💰 1. The Financial Asset (The War Chest)

- **Goal:** ₹2-5 Lakhs liquid cash by graduation.
- **Source:** Paid Internships (Level 2), Freelance DevOps gigs.
- **Purpose:** To buy hardware (Servers, GPUs) and fund your own startup experiments without asking parents for money.

📣 2. The Brand Asset (The Voice)

- **Goal:** A "Digital Garden" that proves your expertise.
- **Strategy:**
 - **YouTube:** "The Struggle Documentary" – Documenting the pain of learning K8s. (High engagement).
 - **Blogs:** Technical deep-dives on Hashnode/Medium.
- **Why:** Opportunities come to *known* experts.

🤝 3. The Network Asset (The Tribe)

- **Goal:** 50 High-Quality Engineer connections.
 - **Role:** Assistant Cloud Lead (Current).
 - **Strategy:** Don't just "connect" on LinkedIn. Build things with people. GSoC is the ultimate networking hack.
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☒ THE DAILY PROTOCOL (How to execute)

You cannot do everything every day. You need a **Rotation Schedule**.

Monday - Friday (The Trenches):

- **09:00 - 16:00:** College (Focus on OS/CN/DBMS).
- **17:00 - 18:30:** **DSA Grind** (1 Problem + Review). *Non-negotiable*.
- **19:30 - 21:30:** **DevOps Project Work** (Project Arsenal/Genesis). This is your "Deep Work."

Saturday (The Lab):

- **All Day:** Experimentation. Break things. Install Linux on the external SSD. Try a new tool. No pressure.

Sunday (The Architect):

- **Morning:** Review the week. Update the "Green Map" on GitHub.
- **Afternoon:** Content Creation (Record a video, write a blog).
- **Evening:** Rest.

This is the document. It covers the Code, the Career, and the Cash. **Save this.** It is your map for the next 1,000 days.

Ready to climb?  