

# 8-Month Full-Stack Developer Mastery Plan (MERN) → Cloud → Job-Ready)

#### Month 1 - Strengthen MERN + Deployment

Day Range	Focus	Key Topics / Tasks	Mini Project / Output
1-2	Revise MERN fundamentals	CRUD APIs, Express middlewares, MVC structure	Refactor an old MERN project
3-4		JWT, bcrypt, refresh tokens, role-based access	Auth module setup
5-6	API Security	Helmet, rate limiting, CORS, dotenv	Secure API endpoints
7-8	MongoDB Deep-Dive	Indexing, Aggregation pipelines	Query optimization
9-10	Deployment	Frontend → Vercel/NetlifyBackend → Render/Heroku/AWS EC2	Live deployed Blog App

Outcome: Fully deployed MERN Blog App (Auth + Comments + Likes + Roles)

#### Month 2 - Next.js + TailwindCSS + TypeScript

Day Range	Focus	Key Topics / Tasks	Mini Project / Output
1-2	Next.js Basics	Pages, SSR vs SSG, Routing	Basic Next App
3-4	Data Fetching	getStaticProps, getServerSideProps, API routes	Dynamic blog page
5-6	€ TailwindCSS	Utility classes, responsive UI	Styled components
7-8	<b>  ★</b> TypeScript	Types, interfaces, props typing	Convert components to TS

**Outcome:** Next.js + Tailwind + TS E-commerce (Stripe Payments)

## Month 3 – Advanced Backend (GraphQL + WebSockets)

Day Range	Focus	Key Topics / Tasks	Mini Project / Output		
1-2		TypeDefs, Resolvers	Simple GraphQL API		
3-4	🌞 Apollo Server	Queries, Mutations	Connect MongoDB		
5-6	WebSockets	$Socket.io \rightarrow Realtime\ Chat$	Live message sync		
7-8	Testing & Logging	Jest/Mocha, Winston	API test setup		
9-10	Integration	Next.js frontend + GraphQL backend	Real-time Chat App		
Outcome: Realtime Chat App with GraphQL & WebSockets					

## Month 4 – Cloud & DevOps Basics

Day Range	Focus	Key Topics / Tasks	Mini Project / Output
1-2	₩ Docker	Build, tag, run containers	Containerized MERN app
3-4	<b>☼</b> CI/CD	GitHub Actions basics	Auto deploy setup
5-6	AWS Services	EC2, S3, RDS, Lambda	Host backend on EC2
7-8	Caching	Redis intro, session caching	Speed up API
9-10	Combine All	Docker + CI/CD + AWS integration	SaaS Dashboard deployment

Outcome: SaaS Dashboard running on AWS + Docker + CI/CD

## Month 5 – Specialization (Pick One)

Day Range	Path	Key Topics / Tasks	Mini Project / Output
1-10	🔖 AI + MERN	OpenAl API, LangChain basics	Al Resume Builder
OR	Mobile (React Native)	Expo, API integration	Laundry App (FreshFold)
OR	<b></b> Cybersecurity	OWASP Top 10, MFA, Secure APIs	Secure Auth System

## Month 6 – System Design + Scaling

**Outcome:** Specialized working project of your choice

Day Range	Focus	Key Topics / Tasks	Mini Project / Output
1-3	*** Basics	Scalability, Load Balancing	Read System Design Primer
4-6	<u>≣</u> Databases	SQL vs NoSQL, sharding, indexing	DB schema case study
7-8	Caching &      Queues	Redis, RabbitMQ basics	Task queue demo
9-10	▶ Design Patterns	Singleton, Factory, Observer	Design doc: Twitter Clone

Outcome: System design case study + patterns understanding

## Month 7 – Interview Prep + Resume + Networking

Day Range	Focus	Key Topics / Tasks	Output
1-3	🗱 DSA Plan	Arrays, Strings, LinkedList	Daily LeetCode
4-6	⊕ Behavioral	STAR Method answers	Practice stories
7-8	Resume + Portfolio	Next.js Portfolio site	Polished portfolio

Outcome: Ready resume + portfolio + interview routine

#### Month 8 – Job Applications + Mock Interviews

Day Range	Focus	Key Topics / Tasks	Output
1-3		Apply 5–10 jobs / day	Tracker sheet
4-6	Referrals	Reach out to employees	Referral messages
7-8	Mock Interviews	Friends / online platforms	Feedback notes
9-10	Project Polish	Improve based on feedback	Final GitHub push

Outcome: Active applications + refined project repo + confidence

#### End Result After 8 Months

Area	Skill Mastered
Full-Stack	MERN + Next.js + TS + Tailwind
* Backend	GraphQL + WebSockets + Redis
Cloud/DevOps	Docker + AWS + CI/CD
Specialization	Al / Mobile / Security
System Design	Scalable app architecture
Career Prep	Resume + Portfolio + DSA + Interviews

Would you like me to make this into a **beautiful PDF version (with progress tracker columns)** so you can print or tick off as you go?

Perfect — here's the **entire SDLC + roles + trending technologies (2025)** turned into a clean, professional **tabular format**, ideal for revision, portfolio notes, or a PDF later.

# **SDLC Phases & Trending Technologies (2025)**

Phase	Who Works Here	What Happens	Trending Tools / Technologies
1 Requirement Analysis & Planning	Product Manager, Business Analyst, UX Researcher, Solution Architect	Understand business needs, define requirements, feasibility & risk analysis	Product Mgmt: Jira, ClickUp, Notion, Confluence, LinearRequirement Gathering: Miro, FigmaCommunication: Slack, MS Teams, Loom, FigJamAl Assistants: ChatGPT, Notion AI, Linear Insights
2 System Design (Architecture & UI/UX)	Solution Architect, UI/UX Designer, Tech Lead	Design architecture, database schema, API contracts, user flows	UI/UX: Figma, Adobe XD, FramerArchitecture: Lucidchart, Draw.io, WhimsicalCloud Design: AWS Well-Architected, GCP Architecture Center, Azure StudioPatterns: Microservices, Kafka, gRPC, GraphQL
3 Development (Coding & Implementation)	Frontend, Backend, Fullstack, Mobile, AI/ML Developers	Build features, write clean code, integrate APIs	Frontend: React, Next.js, Vue 3, Tailwind CSSBackend: Node.js (Express/NestJS), Django/FastAPI, Spring Boot, GoLangDatabases: MongoDB, PostgreSQL, Redis, FirebaseAPIs: REST, GraphQL, tRPCMobile: React Native, FlutterAI/ML: PyTorch, TensorFlow, LangChain, OpenAI APIVersion Control: Git, GitHub/GitLab
4 Testing (QA & Automation)	QA Engineer, SDET, Automation Engineer	Validate functionality, automate tests, ensure quality	Automation: Selenium, Cypress, PlaywrightAPI Testing: Postman, KarateMobile Testing: Appium, DetoxUnit Testing: Jest, Mocha, PyTest, JUnitCI/CD Testing: GitHub Actions, JenkinsAI Testing: Testim.io, Mabl, BrowserStack (AI)
5 Deployment (Release & Delivery)	DevOps, Release Engineer, Cloud Engineer	Deploy app to servers/cloud, manage environments	CI/CD: GitHub Actions, GitLab CI, CircleCI, ArgoCDContainers: Docker, Kubernetes, HelmCloud Platforms: AWS, Azure, GCP, DigitalOcean, Vercel, NetlifyServerless: AWS Lambda, Cloudflare Workers, Firebase Functions

6 Operations & Monitoring	DevOps, SRE (Site Reliability Engineer), CloudOps	Monitor uptime, logs, performance, scale infrastructure	Monitoring: Prometheus, Grafana, DatadogLogging: ELK Stack, LokiError Tracking: Sentry, RollbarInfra as Code: Terraform, Pulumi, Ansible
7 Maintenance & Support	Tech Support, Customer Success, On-call Engineers	Handle bugs, updates, security patches, customer queries	<b>Ticketing:</b> Zendesk, Freshdesk, Jira Service Desk <b>Feedback:</b> Intercom, Hotjar, Crisp <b>Automation:</b> Al Chatbots (Drift, ChatGPT bots) <b>Observability:</b> OpenTelemetry, Honeycomb
	Everyone	Continuous integration, security, collaboration	Collaboration: GitHub Copilot, ChatGPT, Cursor AlDevSecOps: Snyk, OWASP ZAP, Prisma CloudAgile Practices: Scrum, Kanban, CI/CD, IaCAl Integration: Al testing, coding, monitoring tools

Would you like me to include the "Roles & Sub-Roles (Product Manager  $\rightarrow$  DevOps  $\rightarrow$  Data Scientist) from your first part in the same tabular style next, right below this?

Perfect — here's the Roles, Sub-Roles & Trending Technologies (2025) section rewritten in a clean tabular format that matches the SDLC table above.

# Roles, Sub-Roles & Trending Technologies (2025)

Role	Trending Technologies / Focus Areas	Sub-Roles	Key Tools / Technologies
Ø Product Manager	Product Analytics, User Feedback, Market Research	Product Owner: Agile, Scrum, Backlog MgmtProduct Marketing Manager: Digital Marketing, Positioning	Jira, Asana, Trello, Productboard
esigner	UX/UI Design, Human-Centered Design	UX Designer: User Research, Wireframing, PrototypingUI Designer: Visual & Interaction Design	Figma, Sketch, Adobe XD, InVision
Frontend Developer	React, Angular, Vue.js, WebAssembly	JavaScript Developer: ES6, FrameworksUI Engineer: HTML, CSS, Responsive Design	Webpack, Babel, ESLint, Jest

Backend Developer	Node.js, Python, Ruby, Go	<b>API Developer:</b> REST, GraphQL, Security <b>Database Admin:</b> Design, Query Optimization	Express.js, Django, Rails, PostgreSQL
<ul><li>Full-Stack</li><li>Developer</li></ul>	MERN, MEAN, JAM Stack	Full-Stack Engineer: React, Node, MongoDBTechnical Lead: Architecture, System Design	Docker, Kubernetes, AWS, Azure
/ QA Engineer	Automated Testing, Test-Driven Development (TDD)	Manual Tester: Test Case Creation, ExecutionAutomation Engineer: Selenium, Appium	Jest, Mocha, Chai, Cypress
	CI/CD, Containerization, Orchestration	CI/CD Engineer: Jenkins, GitLab CICloud Engineer: AWS, Azure, GCP	Docker, Kubernetes, Ansible, Terraform
Security Engineer	Cybersecurity, Threat Detection, Incident Response	Security Analyst: Threat Modeling, Vulnerability ScansIncident Responder: Forensics, Incident Handling	OWASP, NIST, Burp Suite, Metasploit
Data Scientist	Machine Learning, Deep Learning, NLP	<b>Data Analyst:</b> Visualization, Analysis <b>ML Engineer:</b> Model Building, Deployment	TensorFlow, PyTorch, scikit-learn, Pandas

Would you like me to now combine both tables ( SDLC + Roles) into a **single**, **well-styled PDF** — with icons, color highlights, and headings (ready for portfolio or notes)?