goggle
made for free at coggle.it

Backend Engineering

Complete Backend Soft...

Hosting

Shared / VPS / Dedicated
- A2 Hosting
- HostGator
- GoDaddy
- DreamHost
- Bluehost
- SiteGround
- Hostinger
- Hostwinds
- InterServer

PaaS
- Vercel
- Netlify
- Salesforce Heroku
- AWS Elastic Beanstalk
- Azure App Service
- Google App Engine
- DigitalOcean App Platform
- Oracle Cloud Platform

IaaS
- Oracle Cloud Infrastructure (OCI)
- Amazon Web Services (AWS)
- Google Cloud Platform (GCP)
- Microsoft Azure
- IBM Cloud
- Alibaba Cloud
- DigitalOcean
- Akamai (Linode)

Backend Frameworks

Work-reducing workarounds

- Spring Boot — Java
- Phoenix — Elixir
- Ruby on Rails — Ruby
- Axum, Actix — Rust
- Django, Flask, FastAPI — Python
- Nuxt.js, Express.js, NestJS, Feathy, Next.js — JavaScript
- ASP.NET Core — C#
- CodeIgniter, Laravel — PHP
- Spring Boot, Ktor — Kotlin
- Gin, Echo — Go
- Vapor — Swift

ORMs and Database Libraries
- Entity Framework
- Prisma
- SQLAlchemy
- Django ORM
- SQLx
- etc...

CMS
- Headless
  - Headless Wordpress
  - Prismic
  - Strapi
  - Sanity
  - Contentful
  - SSGs (often paired with headless CMS)
    - Gatsby
    - Docusaurus
    - Jekyll
    - Astro
    - Hugo
    - 11ty
- Drupal
- Joomla
- Wordpress
- Umbraco (C#)

Clients + Servers

Servers
- IIS
- Apache
- NGINX
- Caddy

CDNs
- Cloudflare
- Cloudfront
- Akamai
- Azure CDN
- Alibaba CDN
- GCP CDN

Browsers (client)
- Webkit (JavaScriptCore)
  - Safari
- Blink (V8)
  - Edge
  - Chrome
  - Opera
  - Brave
- Gecko (SpiderMonkey)
  - Firefox

DNS

Databases

SQL
- SQL Server
- Oracle
- Db2
- MySQL
- Postgres
- MariaDB
- SQLite
- Redshift
- Snowflake

NoSQL
Didn't want to branch further but can split NoSQL in to four categories: key-value, graph, column, document.

- MongoDB
- IndexedDB
- DocumentDB
- CouchDB
- Neo4j
- DynamoDB
- BigTable
- Cassandra
- HBase
- SurrealDB
- Redis
- Memcached
- Elasticsearch
- Firebase (Supabase as alternative utilizing Postgres)

Communication

Notations
- Markdown
- YAML
- JSON
- XML
- CSV
- Protobuf
- TOML

APIs / comms
- WebSockets
- GraphQL
- REST
- gRPC
- SOAP
- JSON-RPC
- Webhooks
- WebRTC
- Server Side Events

Protocols
- email
  - POP3
  - SMTP
  - IMAP
- IPv4 + IPv6
- TCP
- UDP
- HTTP + HTTPS — methods: GET, POST, PUT, DELETE, PATCH
- SSH
- FTP + FTPS + SFTP
- messaging
  - AMQP
  - MQTT
  - STOMP

Cloud Services (AWS, GCP, Azure)

- Monitoring
  - AWS CloudWatch
  - GCP Cloud Monitoring
  - Azure Monitor
- Managed DBs
  - AWS RDS
  - GCP Cloud SQL
  - Azure Database
- Storage
  - AWS S3
  - GCP Cloud Storage
  - Azure Blob Storage
- Compute
  - AWS EC2
  - GCP Compute Engine
  - Azure VMs
- Serverless functions
  - AWS Lambda
  - GCP Cloud Functions
  - Azure Functions
- Identity
  - AWS IAM
  - GCP IAM
  - Azure AD
- DNS
  - AWS Route 53
  - GCP Cloud DNS
  - Azure DNS
- Virtual Cloud
  - AWS VPC
  - GCP VPC
  - Azure VNet
- CDN
  - AWS CloudFront
  - GCP Cloud CDN
  - Azure CDN
- CI/CD
  - AWS CodePipeline
  - GCP Cloud Build / Deploy
  - Azure DevOps Pipelines
- Certificate Management
  - AWS Certificate Manager (ACM)
  - GCP Certificate Manager
  - Azure Key Vault Certificates
- Containers
  - AWS ECR
  - GCP Artifact Registry
  - Azure Container Registry
- Serverless Compute
  - AWS Fargate
  - Google Cloud Run
  - Azure Container Instances
- Kubernetes
  - AWS EKS
  - Google Kubernetes Engine (GKE)
  - Azure Kubernetes Service (AKS)
- IaC
  - AWS CloudFormation
  - GCP Deployment Manager
  - Azure Resource Manager
- Load balancing
  - AWS Elastic Load Balancing
  - Google Cloud Load Balancing
  - Azure Load Balancer

App Dev Lifecycle

- Local Dev
  - OS
    - Windows
    - Linux / Unix
    - Mac
  - Editor
    - Terminal — Vim, Neovim, Nano
    - Text Editor — VS Code
    - IDE — PyCharm, Visual Studio, etc
- Source Control
  - Git
  - Subversion
  - Hosting
    - GitLab
    - GitHub
    - BitBucket
- Containerization
  - Docker
    - Image Hosting
      - Harbor
      - Google Artifact Registry
      - ACR
      - DockerHub
      - ECR
      - GitHub Container Registry
      - GitLab Container Registry
  - Orchestration
    - Docker Compose
    - Docker Swarm
    - ECS
    - Nomad
    - Kubernetes (K8s)
      - GKE
      - EKS
      - LKE
      - AKS
      - IBM Kubernetes Service
      - DigitalOcean Kubernetes
      - Enterprise Extensions
        - Tanzu
        - OpenShift
        - Rancher
        - EKS Anywhere
- CI/CD
  - Jenkins
  - GitHub Actions
  - GitLab CI/CD
  - CircleCI
  - CodePipeline
  - Azure DevOps
  - GCP DevOps
- Testing
  - Testing Framework (pytest for example)
  - Swagger
  - Postman
  - Selenium
  - Cypress
  - Playwright
- Issues / tasks
  - Notion
  - Asana
  - Trello
  - Jira
  - GitHub Issues
  - GitLab Issues
- Monitoring
  - Grafana
  - Datadog
  - CloudWatch
  - Prometheus
  - New Relic
  - Notifications
    - PagerDuty
    - Opsgenie

VIDEO GUIDE

Complete Roadmap for ...

The secret here is to not learn everything but rather learn a technology from each category. This will give you experience in the end-to-end while also giving you something to compare every other technology against.

Learning Roadmap

- OS — Your primary OS; Linux
- Editor — VS Code
- Source Control — Git (terminal); GitHub
- Backend Language — Python
- Backend Framework — Django
- Database — Postgres
- Library / ORM — Raw SQL; Django ORM
- Frontend? — React
- Communication — REST; WebSockets; Webhooks
- Notations — JSON; Markdown
- Protocols — HTTPS; SSH
- Testing — Postman; Swaggrr
- Cloud Providers — AWS
- Containerizing? — Docker; Docker Compose; ECR
- CI/CD? — CodePipeline
- Hosting — Elastic Beanstalk; Fargate; S3
- CDN — Cloudflare
- Monitoring — CloudWatch; PagerDuty
- Issues — GitHub
- Need More?
  - Languages
    - 1 or 2 "lower level" languages
      - Rust
      - Go
    - JavaScript + TypeScript
  - Fullstack
    - State management
      - React Query OR RTK Query
    - Next.js
  - Comms
    - ProtoBufs + gRPC
    - GraphQL
    - Message Broker
      - RabbitMQ
  - NoSQL
    - Firebase
    - Redis
    - MongoDB
  - Containerization
    - Kubernetes
    - EKS

- My Extreme Productivit...
- Linux Command Line Al...
- Super Clean Visual Stud...
- Getting Started with Git ...
- Git + GitHub Branches, ...
- Beginner Python Progra...
- Python Programming Al...
- Django Crash Course - I...
- PostgreSQL Introductio...
- SQLite Introduction - Be...
- Database Design All-in-...
- React JS Full Course (2...
- React JS Full Course (2...
- Django REST Framewor...
- You Should Learn Mark...
- SaaS, PaaS and IaaS - F...
- 25+ Most Important AW...
- Python + Flask Deploy t...
- Introduction to Boto3 fo...
- Using AWS S3 to Deplo...
- Rust Programming Intro...
- Learn Rust programmin...
- Rust References and O...
- WebAssembly Introduct...
- Unsafe Rust - Complete...
- Keys and Digital Signat...
- Node.JS Full Course (T...
- Introduction to Redis St...
- MongoDB in 18 Minutes...