عالی، بر اساس فایلی که دادی (**Django Roadmap**) کل محتوا رو به‌صورت یک **چک‌لیست کامل، حرفه‌ای و انگلیسی** برات بازنویسی می‌کنم؛ طوری که مستقیم بشه ازش برای **PowerPoint، Notion، GitHub README یا برنامه یادگیری** استفاده کرد.

✅ Django Backend Engineer – Complete Checklist (Roadmap-Based)

🌐 Web Fundamentals

- Understand how the web works (HTTP, HTTPS, DNS)
- Client–Server architecture
- Request–Response lifecycle
- REST principles

🐍 Python Prerequisites

- Python syntax & data types
- Functions and modules
- Virtual environments
- Package management (pip)
- OOP basics in Python

🚀 Getting Started with Django

- Install Django
- Create first Django project
- Run development server
- Understand manage.py
- Project vs App concept
- Create and register Django apps

📁 Django Project Structure

- settings.py
- urls.py
- wsgi.py & asgi.py
- views.py
- models.py
- admin.py
- tests.py
- migrations/
- templates/
- static/
- media/

🔁 URL Routing

- URL patterns
- Path converters
- Named URLs
- Reverse URL resolution
- Regex paths
- Grouping URLs
- Routing middleware

👁 Views

- Function-Based Views (FBV)
- Class-Based Views (CBV)
- Generic Views

- ListView
- DetailView
- CreateView
- UpdateView
- DeleteView
- Customizing CBVs

🧠 MVC / MVT Architecture

- Understand Django MVT pattern
- Role of Models
- Role of Views
- Role of Templates

🎨 Templates (DTL)

- Template rendering
- Variables
- Filters
- Custom filters
- Tags
- Custom tags
- Template inheritance
- {% for %} loops
- {% if %} conditions

🧩 Models & ORM

- Model definition

- Field types
- Field options
- Model relationships (OneToOne, FK, M2M)
- Model inheritance
- Custom fields
- Model methods
- Validation

🗄 Databases

- SQLite
- PostgreSQL
- MySQL
- MariaDB
- Database configuration
- Switching databases

🔍 Querying Data (ORM)

- Create
- Update
- Delete
- Filtering & lookups
- Aggregations
- Raw SQL queries
- Query optimization
- Avoiding N+1 queries

⬅️ Migrations

- Create migrations
- Apply migrations
- Rollback migrations
- Data migrations
- Schema migrations

🛠️ Django Admin

- Register models
- Admin customization
- List display
- Search & filters
- Inline models

👤 Authentication & Authorization

- Built-in User model
- Custom User model
- Permissions
- Groups
- Protecting views
- django-allauth

📩 Forms

- Django Forms
- ModelForms

Form validation •

Custom validation logic •

📦 **Static & Media Files**

Static files setup •

Media files handling •

WhiteNoise •

Serving static files in production •

📄 **Pagination**

Built-in pagination •

Custom pagination logic •

Performance considerations •

🧱 **Middleware**

Built-in middleware •

Custom middleware •

Request/Response processing •

🧪 **Logging, Debugging & Testing**

Django logging framework •

Loggers •

Handlers •

Formatters •

Debug Toolbar •

- django-silk
- PDB / IPDB
- Custom error pages
- Unit tests
- TestCase
- pytest
- Django Test Framework

⚙️ Advanced Django Topics

- Background tasks
- Celery
- Asynchronous Django
- Caching
- Localization & i18n
- Signals
- Django shell usage

🌐 API Development (DRF)

- Django REST Framework setup
- Serializers
- Views & ViewSets
- Routers
- Authentication
- Permissions
- Pagination
- API versioning

🚢 Deployment & Production

- Virtual environments
- Environment variables
- Production checklist
- Gunicorn / Uvicorn
- Nginx
- Static files in production
- Security settings
- Database backups

📈 Continuous Learning

- Python Roadmap
- Backend Roadmap
- Full Stack Roadmap
- roadmap.sh resources

✅ Final Note

This checklist represents a **complete, industry-aligned Django learning path**.
Each item should be practiced through **real projects**, not just theory.

اگر بخوای:

- این رو **دقیقاً به اسلایدهای PowerPoint تبدیل کنم**
- یا به **Senior-level roadmap با Data & Performance focus**
- یا حتی به **Notion / GitHub checklist template**

بگو، مرحله بعدی رو حرفه‌ای‌ترش می‌کنیم 🚀