

# Skill Shikshya

## 3rd Batch Python/Django Students Projects(Any 3)

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### 1. E-Commerce API (Amazon-like Backend)

#### ◆ Description:

A fully functional **e-commerce backend** where users can **browse products, add them to carts, and place orders securely.**

#### ◆ Features:

- ✓ **User Authentication & Role-Based Access** (Admin, Seller, Buyer)
- ✓ **Product Management:** Categories, filters, stock availability
- ✓ **Shopping Cart & Checkout**
- ✓ **Order Processing & Tracking**
- ✓ **Payment Integration** (Stripe, PayPal)
- ✓ **Admin Panel for Product & Order Management**

#### ◆ Tech Stack:

- **Backend:** Django, DRF, PostgreSQL
- **Payment Processing:** Stripe API
- **Caching:** Redis
- **Task Management:** Celery (for order processing)

 **Timeline:** 4-6 weeks

 **Difficulty:** ★★★★★☆

## 2. Project Management System (Trello-Like Kanban Board)

### ◆ Description:

A **project management tool** where users can **create tasks, assign them, and track progress visually**.

### ◆ Features:

- ✓ **Project & Task Creation**
- ✓ **Task Assignment to Team Members**
- ✓ **Task Progress Tracking (To-Do, In Progress, Done)**
- ✓ **Real-Time Notifications**
- ✓ **File Attachments in Tasks**

### ◆ Tech Stack:

- **Backend:** Django, DRF, PostgreSQL
- **Task Processing:** Celery + Redis
- **Real-Time Updates:** WebSockets

 **Timeline:** 3-5 weeks

 **Difficulty:** ★★☆☆☆

## 3. AI-Powered Knowledge Base (DeepSeek AI Integration)

### ◆ Description:

A **smart documentation system** where users can **search for answers**, and AI provides **contextual responses**.

### ◆ Features:

- ✓ **AI-Generated Answers from Uploaded Documents**
- ✓ **User Authentication & Saved Searches**
- ✓ **Markdown Support for Documentation**
- ✓ **AI Chat-Based Assistance**

### ◆ Tech Stack:

- **Backend:** Django, DRF, PostgreSQL
- **AI Processing:** DeepSeek AI
- **Search Optimization:** Elasticsearch

 **Timeline:** 5-7 weeks

 **Difficulty:** ★★★★★

## 4. Multi-Tenant CRM – Customer Relationship Management System

### ◆ Description:

A CRM where businesses can manage leads, customers, and interactions efficiently.

### ◆ Features:

- ✓ **Multi-Tenant Support** (Each company has its own dashboard)
- ✓ **Lead Tracking & Customer Management**
- ✓ **Email & SMS Notifications**
- ✓ **Custom Reports & Analytics**
- ✓ **API for Third-Party Integrations**

### ◆ Tech Stack:

- **Backend:** Django, DRF, PostgreSQL
- **Background Tasks:** Celery
- **Caching:** Redis

 **Timeline:** 4-6 weeks

 **Difficulty:** ★★★★★☆

## 5. Learning Management System (LMS) – Udemy Clone

### ◆ Description:

An LMS where instructors can upload courses, and students can enroll & complete them.

◆ **Features:**

- ✓ **User Roles (Admin, Instructor, Student)**
- ✓ **Course Creation with Video & Text Content**
- ✓ **Quiz & Assignment Submissions**
- ✓ **Progress Tracking & Certification**
- ✓ **Payment Integration for Paid Courses**

◆ **Tech Stack:**

- **Backend:** Django, DRF, PostgreSQL
- **File Storage:** AWS S3 (for videos)
- **Payment Processing:** Stripe API



**Timeline:** 6-8 weeks



**Difficulty:** ★★★★★

## 6. AI-Powered Automated Investment Portfolio Manager

◆ **Description:**

An **AI-driven investment portfolio manager** that helps users **analyze stocks, manage assets, and optimize their investment strategies** using machine learning & DeepSeek AI.

◆ **Features:**

✓ **User Portfolio Management:**

- Users can add stocks, mutual funds, crypto, or real estate investments.
- Live market price tracking (via Alpha Vantage, Yahoo Finance).
- Risk assessment & diversification analysis.

✓ **AI-Based Investment Recommendations:**

- DeepSeek AI-powered portfolio optimization.
- AI-generated market trend predictions.
- Sentiment analysis (news & social media impact on stocks).

✓ **Automated Rebalancing:**

- AI suggests when to buy/sell based on investor type.
- Automated alerts (e.g., stop-loss hits, price spike).

#### ✓ **Risk Assessment & Forecasting:**

- Monte Carlo simulations for investment return predictions.
- AI-powered risk scoring.

#### ✓ **Advanced Financial Dashboard:**

- Data visualization (charts, graphs, heatmaps).
- Comparative stock & asset analysis.
- Downloadable PDF financial reports.

#### ◆ **Tech Stack:**

- **Backend:** Django, DRF, PostgreSQL
- **AI Processing:** DeepSeek AI
- **Data APIs:** Alpha Vantage, Yahoo Finance
- **Task Management:** Celery + Redis
- **Frontend:** React.js or Next.js
- **Security:** JWT Authentication + Role-Based Access Control

📅 **Timeline:** 7-10 weeks

★ **Difficulty:** ★★★★★