

## Scope of Work: AI-Powered E-learning Platform

### 1. Project Overview

The platform will offer AI-driven online courses focused on digital skills, freelancing, business, and professional development. It will provide an interactive learning experience with AI-generated insights, assessments, and automation for content creation.

### 2. Features & Deliverables

#### 2.1. Core Features

##### ✔ User Authentication & Profiles

- Secure login with OAuth (Google, Facebook, LinkedIn, email)
- User profiles with learning progress tracking

##### ✔ Course Management System (CMS)

- Create, edit, and publish courses with video, text, quizzes, assignments
- AI-powered course recommendations
- Progress tracking & certification issuance

##### ✔ AI-Powered Features

- AI-generated course suggestions
- AI-based content summarization & quiz generation
- AI-powered chat assistant for student support

##### ✔ Live & Recorded Classes

- Integration with Zoom, Microsoft Teams, or a WebRTC-based video system
- Live chat & Q&A sessions

##### ✔ Community & Engagement

- Discussion forums & peer interactions
- Gamification (leader boards, badges, points system)

##### ✔ Monetization & Payment Gateway

- Subscription models (monthly/yearly)
- One-time course purchases
- Payment integration with Stripe, PayPal, Razorpay

## ✔ Admin Dashboard & Analytics

- Instructor analytics dashboard
- Student engagement insights
- AI-powered recommendations for course improvements

## 3. Technology Stack

### Frontend (User Interface)

- React.js / Next.js (for fast, SEO-friendly web app)
- TailwindCSS / Material UI (for a modern UI/UX)

### Backend (Server & API)

- Node.js + Express.js (scalable backend API)
- GraphQL / REST API for data management

### Database

- MongoDB / PostgreSQL (scalable data storage)
- Redis (caching for faster performance)

### AI & Machine Learning

- OpenAI GPT API (AI chatbots, course recommendations)
- Google Cloud AI / TensorFlow (AI-driven quiz & assessment generation)

### Cloud & DevOps

- AWS / Google Cloud / DigitalOcean (hosting)
- Firebase (authentication, push notifications)
- Docker & Kubernetes (scalability)

### Payments & Security

- Stripe / PayPal (for payments)
- JWT (JSON Web Tokens) & OAuth 2.0 (secure authentication)

## 4. Project Timeline & Milestones

Phase	Duration	Deliverables
1. UI/UX Design	1 weeks	Wireframes, prototypes, user flow diagrams
2. Backend & Database Setup	3 weeks	Set up API, user authentication, and database

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|---------------------------------------|---------|--|
| 3. Frontend Development               | 1 weeks | Develop core platform, implement course player |
| 4. AI & ML Integration                | 1 weeks | AI-based content recommendations & Chabot      |
| 5. Payment & Monetization             | 1 weeks | Payment gateway, subscription models           |
| 6. Testing & QA & Deployment & Launch | 1 weeks | Performance testing, bug fixing                |

Total Development Time: ~2 Months

## 5. Cost Estimate

Component	Estimated Cost
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Sign Up	\$9000
UI/UX Design	\$5,000
Frontend Development	\$6000
Backend & API Development	\$5000
Database & Cloud Hosting Setup	\$5,000
AI & Machine Learning Features	\$10,000

📌 Estimated Total Cost: \$40,000

(Prices may vary based on team location, developer expertise, and feature complexity.)

## 6. Post-Launch Support & Maintenance

After the initial launch, a monthly maintenance plan is recommended:

🔹 Basic Maintenance (\$1,500/month)

- Server monitoring, minor bug fixes, security patches

🔹 Advanced Maintenance (\$3,000/month)

- Feature updates, performance optimization, AI improvements