

ACE Project Documentation

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Digital Egypt Pioneers Initiative

React Front-End Development

ACE - Access to Careers & Education

ACE (Access to Careers & Education) is the **world's first platform** of its kind that seamlessly integrates education and career development into one unified digital system.

The name **ACE** introduces an **innovative** and **pioneering** concept that **appears for the first time in this field**.

Our vision is to redefine the connection between learning and employment, transforming them into a single, continuous experience where university students are closer to their future careers, companies are closer to the qualified talents they seek, and instructors are closer to their accomplishments.

Edvance

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Digital Egypt Pioneers Initiative *Integrated Education & Career Platform*

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been instrumental in shaping our experience, providing us with the knowledge, insights, and encouragement needed to excel.

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Abstract

ACE (Access to Careers & Education) is a groundbreaking platform designed to revolutionize the connection between education and employment. It uniquely integrates a Learning Management System (LMS) with a job platform, creating a unified digital ecosystem that empowers learners, facilitates career development, and enables companies to discover pre-qualified talent efficiently.

The platform addresses the disconnect between academic learning and real-world job opportunities by providing personalized career paths, fostering collaboration between educational institutions and companies, and offering an interactive learning environment powered by AI and analytics.

ACE serves university students, K-12 learners, teachers, parents, and companies, streamlining processes from course enrollment and skill development to job application and recruitment, thereby establishing a new global model for educational and employment efficiency.

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1. Project Planning & Management

1.1. Project Proposal

Overview

ACE (Access to Careers & Education) is the first platform of its kind in the world that combines a Learning Management System (LMS) with Job Platforms into one smart and efficient system. It serves as the missing bridge between “education” and “employment”, transforming the academic journey into a complete professional experience.

Objectives

- Integrate education and the labor market into one connected experience
- Personalize the career path for each user based on their skills and educational level
- Enable universities and companies to collaborate in practically training students
- Provide an interactive learning environment built on AI and analytics
- Establish a new global model that unites education and employment in a single digital ecosystem

Scope

The system caters to various user types, providing distinct interfaces and functionalities: - **University Student Portal**: Access courses, build professional profiles, apply for jobs/internships - **Company Portal**: Post job opportunities, search for talent, manage recruitment pipelines - **Learner Portal (K-12)**: Access courses, track progress, join live sessions - **Teacher Dashboard**: Create and manage courses, conduct live classes, track student performance - **Parent Dashboard**: Monitor child’s academic and career progress - **Admin Dashboard**: Oversee platform operations, manage users, and analyze platform data

1.2. Project Plan

Development Phases

- **Phase 1:** Analysis & Planning - Market research and user needs analysis
- **Phase 2:** Core Development - Building the backend system and main interfaces
- **Phase 3:** System Integration - Integrating the LMS with the job system
- **Phase 4:** Feature Enhancement - AI integration, live classes, payment processing
- **Phase 5:** Testing & Launch - Comprehensive testing and deployment

Deliverables

- A fully functional ACE platform integrating LMS and job board features
- Personalized dashboards for all user types (Student, University Student, Teacher, Company, Parent, Admin)
- AI-powered career mentor using Google Gemini
- Live class streaming via Agora RTC
- Payment processing via Stripe and PayPal
- Identity verification via Didit
- Multi-language support (Arabic & English)
- Comprehensive documentation

1.3. Task Assignment & Roles

Responsibilities for team members are defined across development, design, and management roles, ensuring efficient project execution. Specific assignments leverage individual expertise in frontend, backend, UI/UX, and project leadership.

1.4. Risk Assessment & Mitigation Plan

Potential risks include integration challenges between LMS and job modules, user adoption rates, data security, and scalability. Mitigation strategies involve: - Thorough testing and phased rollouts - Robust security protocols (JWT authentication, role-based access) - Flexible, scalable architecture (Next.js + Laravel) - Real-time monitoring and error handling

1.5. KPIs (Key Performance Indicators)

KPI	Description	Target
User Engagement Rate	Percentage of active users across all roles	High engagement across segments
Job/Internship Placement Rate	Students securing positions through platform	Significant year-on-year increase
Course Completion Rate	Students successfully completing courses	Above industry average
System Uptime	Platform availability	99.9% uptime

User Satisfaction Score	Based on feedback and reviews	Consistently high (4.5+/5)
AI Mentor Utilization	Users engaging with AI career mentor	Growing adoption

2. Technology Stack & Architecture

2.1. Frontend Technologies

Technology	Version	Purpose
Next.js	15.5.7	React framework with SSR
React	19	UI component library
TypeScript	Latest	Type-safe development
Tailwind CSS	4	Utility-first styling
Three.js	Latest	3D graphics for hero section
React Three Fiber	Latest	React wrapper for Three.js
Recharts	Latest	Data visualization & analytics
Lucide React	Latest	Modern icon library
React Hook Form	Latest	Form handling
Zod	Latest	Schema validation

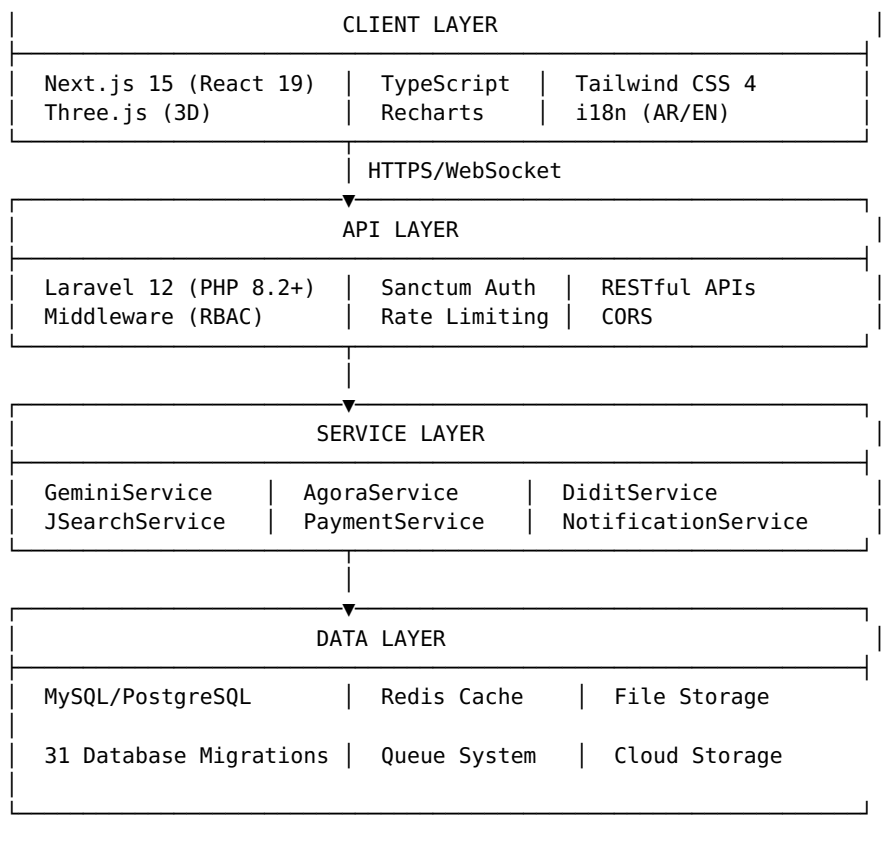
2.2. Backend Technologies

Technology	Version	Purpose
Laravel	12.0	PHP backend framework
PHP	8.2+	Server-side language
MySQL/PostgreSQL	Latest	Database
Laravel Sanctum	Latest	API authentication
Eloquent ORM	Latest	Database abstraction

2.3. Third-Party Integrations

Service	Purpose	Status
Google Gemini AI	AI Career Mentor	Implemented
Agora RTC SDK	Live video classes	Implemented
Stripe	Credit card payments (EGP)	Implemented
PayPal	PayPal wallet payments	Implemented
Didit API	Identity verification (KYC)	Implemented
JSearch API	External job listings	Implemented
Mailgun	Email delivery	Implemented
Socket.io	Real-time communication	Implemented

2.4. System Architecture



3. Requirements Gathering

3.1. Stakeholder Analysis

Stakeholder	Needs
University Students	Build professional profiles, gain practical skills, find job/internship opportunities, AI career guidance
Companies/Employers	Qualified young talent, efficient recruitment tools, application management
Learners (K-12)	Engaging educational content, live classes, progress tracking
Teachers/Trainers	Course creation tools, live teaching capabilities, student analytics, revenue management
Parents	Monitor children's academic and career development
Admins	System operations, user management, content moderation, platform analytics

3.2. User Stories & Use Cases

Student (K-12)

- As a student, I want to browse and enroll in courses so I can learn new skills
- As a student, I want to join live classes so I can interact with teachers in real-time
- As a student, I want an AI mentor to help guide my learning path
- As a student, I want my parents to track my progress so they stay informed

University Student

- As a university student, I want to find relevant internships based on my skills and major
- As a university student, I want to build a comprehensive profile with my CV, skills, and projects
- As a university student, I want to apply for jobs and track my applications
- As a university student, I want AI-powered career advice to help me make informed decisions

Teacher

- As a teacher, I want to create and publish online courses
- As a teacher, I want to conduct live classes with video streaming
- As a teacher, I want to track student progress and attendance
- As a teacher, I want to manage course enrollment and payments

Company

- As a company, I want to post job openings and filter candidates by specific skills
- As a company, I want to view candidate profiles and download their CVs
- As a company, I want to manage applications through different stages
- As a company, I want AI assistance for recruitment insights

Parent

- As a parent, I want to monitor my child's course progress
- As a parent, I want to view my child's session attendance
- As a parent, I want to receive notifications about my child's achievements

Admin

- As an admin, I want to approve teacher registrations
- As an admin, I want to verify company accounts
- As an admin, I want to moderate course content
- As an admin, I want comprehensive platform analytics

3.3. Functional Requirements

Authentication & Authorization

- User registration with email verification (OTP)
- Role-based login (Student, University Student, Teacher, Company,

- Parent, Admin)
- JWT token-based authentication via Laravel Sanctum
- Password recovery and reset functionality
- Session management and token expiration handling

Course Management

- Course creation with multiple lessons
- Support for recorded and live courses
- Course enrollment and payment processing
- Progress tracking per lesson
- Certificate generation (ready for implementation)

Job Board

- Job posting creation and management
- Application submission with cover letter
- Application status tracking (pending → reviewing → shortlisted → interviewed → accepted/rejected)
- CV management and downloads
- External job integration via JSearch API

Live Classes

- Session scheduling and management
- Real-time video streaming via Agora RTC
- Chat functionality during sessions
- Attendance tracking
- Session recording capabilities

AI Features

- AI Career Mentor powered by Google Gemini
- CV analysis and recommendations
- Learning path suggestions
- Job role matching
- Skills gap analysis

Notifications

- Real-time notification delivery
- Application status updates
- Course enrollment notifications
- Session reminders
- Parent-student follow requests

3.4. Non-functional Requirements

Requirement	Implementation
Performance	Next.js with Turbopack, code splitting, lazy loading, image optimization
Security	JWT authentication, role-based access control, password hashing (bcrypt), CORS configuration
Scalability	Modular architecture, API-first design, queue system for background jobs
Usability	Responsive design, RTL support for Arabic, dark/light themes

Reliability	Error handling, input validation, comprehensive logging
Accessibility	High contrast themes, responsive layouts, ARIA support

4. System Analysis & Design

4.1. Problem Statement & Objectives

Problem Statement

The significant disconnect between traditional education systems and the demands of the job market leads to graduates lacking essential practical skills and companies struggling to find qualified talent. This results in a gap between academic learning and professional readiness, hindering career progression and economic growth.

Objectives

ACE aims to bridge this gap by providing an integrated platform that:

- Connects learning pathways directly to career opportunities
- Empowers students with relevant skills and market insights
- Enables efficient talent discovery for employers
- Facilitates collaboration between educational bodies and industries
- Provides AI-powered career guidance and mentoring

4.2. Database Design & Data Modeling

The database is designed using a normalized approach (3NF) with MySQL/PostgreSQL as the RDBMS, optimized for scalability and performance.

Core Entities

User Management

Model	Description
User	Base user model with authentication
StudentProfile	K-12 student information
UniversityStudentProfile	Comprehensive profile with skills, CV, experience
TeacherProfile	Teacher specialization and verification
ParentProfile	Parent information
Company	Company details and verification

Course System

Model	Description
Course	Course definition with pricing
CourseLesson	Individual lessons within courses
CourseEnrollment	Student enrollment tracking
LessonProgress	Progress per lesson
LiveSession	Live class sessions

SessionAttendance	Attendance records
ChatMessage	Session chat messages

Job System

Model	Description
JobPosting	Job listings with requirements
JobApplication	Applications with status tracking

Other Entities

Model	Description
Payment	Transaction records
Notification	System notifications
AiConversation	AI mentor chat history
ParentStudentFollowRequest	Parent-child linking
DiditVerification	Identity verification records

Database Statistics

- **Total Migrations:** 31
- **Key Relationships:** Foreign key constraints with CASCADE rules
- **Indexes:** Strategic indexing for query optimization
- **Soft Deletes:** Implemented for data recovery

4.3. Data Flow & System Behavior

Authentication Flow

User → Login Request → Laravel Sanctum → Token Generation → Cookie Storage → Protected Routes

Course Enrollment Flow

Browse Courses → Select Course → Payment (Stripe/PayPal) → Enrollment Created → Access Content

Job Application Flow

Browse Jobs → View Details → Submit Application → Company Review → Status Updates → Notifications

Live Class Flow

Teacher Schedules → Students Join → Agora Token Generated → Video Stream → Chat & Attendance → Session Ends

4.4. UI/UX Design & Prototyping

Design Principles

- **Professional Aesthetic:** Inspired by GitHub and VS Code
- **Simplicity & Clarity:** Clean interfaces with intuitive navigation
- **Goal Focus:** Highlighting progress and opportunities
- **Bilingual Support:** Full Arabic and English support with RTL

Visual Identity

- **Color Scheme:** Professional with light and dark themes
- **Typography:** Cairo font for Arabic/Latin support
- **Icons:** Lucide React for modern, minimal icons
- **Charts:** Recharts for analytics visualization

Responsive Design

- Mobile-first approach
 - Tailwind CSS responsive utilities
 - Dynamic layouts for all screen sizes
 - Touch-friendly interfaces
-

5. Implementation (Features by User Type)

5.1. Student Features (K-12)

Dashboard (/student/dashboard)

- Course overview and statistics
- Recent activity feed
- Quick actions for navigation

Course Management

- **Browse Courses** (/student/courses): Filter and search courses
- **Course Details** (/student/courses/[id]): View content, enroll
- **My Courses** (/student/my-courses): Track enrolled courses
- **Payment** (/student/payment/[courseId]): Stripe/PayPal integration

Live Learning

- **My Sessions** (/student/my-sessions): Upcoming live classes
- **Live Class** (/student/live-class/[sessionId]): Join with Agora RTC

AI & Profile

- **AI Mentor** (/student/ai-mentor): Gemini-powered career guidance
- **Profile** (/student/profile): Personal information management
- **Follow Requests** (/student/follow-requests): Parent linking

5.2. University Student Features

Dashboard (/university_student/dashboard)

- Profile completeness indicator
- Application statistics
- Job recommendations

Course Access

- **Course Details** (/university_student/courses/[id])
- **Payment Processing** (/university_student/payment/[courseId])

Job Board

- **Browse Jobs** (/university_student/jobs): JSearch integration
- **Job Details** (/university_student/jobs/[id]): Apply with cover letter
- **My Applications** (/university_student/applications): Track status

Profile & AI

- **Profile** (/university_student/profile):
 - Personal information
 - CV upload and management
 - Skills and certifications
 - Work experience
 - Projects portfolio
 - Languages
 - Public profile settings
 - Profile views tracking
- **AI Mentor** (/university_student/ai-mentor): Career-focused guidance

5.3. Teacher Features

Dashboard (/teacher/dashboard)

- Class overview and statistics
- Revenue tracking
- Student engagement metrics

Course Management

- **My Courses** (/teacher/courses): List all courses
- **Create Course** (/teacher/courses/create): Full course creation wizard
- **Edit Course** (/teacher/courses/[id]/edit): Update content
- **Course Details** (/teacher/courses/[id]): View enrollments

Live Teaching

- **Teach Live Class** (/teacher/live-class/[sessionId]):
 - Host video stream via Agora
 - Manage participants
 - Chat moderation
 - Attendance tracking

Analytics

- **Class Analytics** (/teacher/analytics):
 - Student progress charts
 - Attendance reports
 - Engagement metrics

Profile

- **Profile** (/teacher/profile): Verification and credentials

5.4. Company/Recruiter Features

Registration (/company/register)

- Public company registration
- Company verification process

Dashboard (/company/dashboard)

- Job posting statistics
- Application overview
- Recent activity

Job Management

- **My Jobs** (/company/jobs): List all postings
- **Create Job** (/company/jobs/new): Job posting creation
- **Job Details** (/company/jobs/[id]): View applications
- **Edit Job** (/company/jobs/[id]/edit): Update posting

Application Management

- **All Applications** (/company/applications): Filter and sort
- **Application Details** (/company/applications/[id]):
 - View candidate profile
 - Download CV
 - Update status
 - Add notes
 - Schedule interviews
 - Mark favorites

AI & Profile

- **AI Mentor** (/company/ai-mentor): Recruitment assistance
- **Company Profile** (/company/profile): Branding and info

5.5. Parent Features

Dashboard (/parent/dashboard)

- Children monitoring overview
- Activity feed

Student Monitoring

- **My Students** (/parent/students): List followed children
- **Student Details** (/parent/students/[id]):
 - Course enrollments
 - Progress tracking
 - Session attendance
 - Achievement history

Profile

- **Profile** (/parent/profile): Personal information

5.6. Admin Features

Dashboard (/admin/dashboard)

- Platform-wide statistics
- User growth charts
- Revenue analytics
- System health

User Management

- **All Users** (/admin/users):
 - View all users
 - Suspend/activate accounts
 - Role management

Teacher Management

- **Teachers** (/admin/teachers):
 - Approval workflow
 - Verification status
 - Performance metrics

Course Moderation

- **Courses** (/admin/courses):
 - Content review
 - Approval/rejection
 - Quality assurance

Company Verification

- **Companies** (/admin/companies):
 - Verification workflow
 - Company analytics
 - Job posting oversight
-

6. Core Platform Features

6.1. Authentication & Authorization

Implementation

- **Backend:** Laravel Sanctum (token-based API authentication)
- **Frontend:** JWT tokens stored in HTTP-only cookies
- **Middleware:** Role-based access control via UserTypeMiddleware

Authentication Flow

1. User registers via /signup or /company/register
2. Email verification via OTP
3. Login credentials validated against bcrypt-hashed passwords
4. Sanctum token issued and stored in authToken cookie
5. User type stored in userType cookie
6. Middleware enforces role-based route protection

Security Features

- Password hashing with bcrypt
- Token expiration and refresh
- CSRF protection

- Rate limiting on authentication endpoints
- Session invalidation on logout

6.2. AI Career Mentor (Gemini Integration)

Features

Feature	Description
General Career Advice	Personalized career guidance
CV Analysis	AI-powered resume feedback
Learning Path	Customized course recommendations
Job Recommendations	Matching jobs to skills
Skills Gap Analysis	Identifying improvement areas

Implementation

- **Service:** GeminiService.php
- **Model:** Google Gemini 2.0 Flash
- **Context:** User profile, courses, applications, job data
- **Safety:** Content filtering enabled
- **Storage:** Conversation history in AiConversation model

Availability

- Students (K-12)
- University Students
- Companies (recruitment focus)

6.3. Live Classes (Agora Integration)

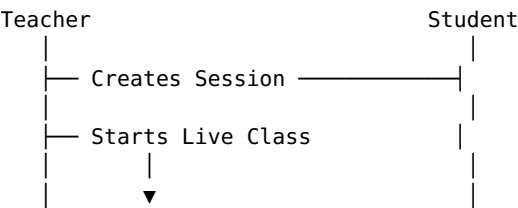
Features

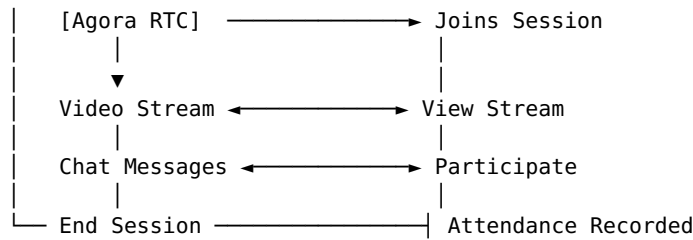
- Real-time video/audio streaming
- Multiple participant support
- Screen sharing capabilities
- In-class chat functionality
- Automatic attendance tracking
- Recording capabilities (server-side)

Implementation

- **Service:** AgoraService.php
- **Token Generation:** Secure RTC tokens
- **Roles:** Host (teacher) and Audience (student)
- **Channel:** Unique per session

User Experience





6.4. Payment Processing (Stripe & PayPal)

Supported Methods

Provider	Currency	Features
Stripe	EGP	Credit/debit cards, secure checkout
PayPal	EGP	PayPal wallet, buyer protection

Implementation

- **Stripe:** Payment Intent API with webhooks
- **PayPal:** Client-side SDK integration
- **Security:** PCI-compliant, no card data stored
- **Flow:** Create intent → Confirm payment → Webhook verification

Payment Flow

Select Course → Choose Payment Method → Process Payment → Webhook Confirmation → Enrollment Created

6.5. Identity Verification (Didit)

Verification Checks

- Document verification
- Face match
- Liveness detection
- Age verification
- AML screening

Implementation

- **Service:** DiditService.php
- **Flow:** Session-based verification
- **Webhook:** Status updates on completion
- **Storage:** DiditVerification model

Use Cases

- Teacher identity verification
- Parent verification for child monitoring
- Company representative verification

6.6. Job Board (JSearch API)

Features

- External job listings integration
- Search by query, location, employment type
- Remote job filtering
- Pagination support
- Results caching

Implementation

- **Service:** JSearchService.php
- **Provider:** RapidAPI JSearch
- **Caching:** Performance optimization
- **Integration:** Combined with platform job postings

6.7. Notification System

Notification Types

- Application status updates
- Course enrollment confirmations
- Live session reminders
- Parent follow request notifications
- Job posting alerts
- System announcements

Features

- Real-time delivery via Socket.io
- Unread count tracking
- Mark as read functionality
- Notification preferences
- Email notifications (Mailgun)

6.8. Internationalization (Arabic & English)

Implementation

- JSON-based translation files
- React Context for language state
- Custom useLanguage() hook
- RTL support for Arabic

Coverage

Language	File Size	Coverage
Arabic	131KB	Full platform
English	96KB	Full platform

Features

- Dynamic language switching
 - Bidirectional text support
 - Cairo font for Arabic typography
 - Persistent language preference
-

7. Testing & Quality Assurance

7.1. Test Cases & Test Plan

Test Categories

Category	Coverage
Authentication	Login, registration, password reset, token management
User Flows	Student, university student, teacher, company, parent journeys
Course Management	Creation, enrollment, progress tracking
Job Board	Posting, application, status management
Live Classes	Session creation, joining, chat, attendance
Payments	Stripe and PayPal flows
AI Features	Mentor conversations, recommendations

Testing Approach

- Manual testing of core functionalities
- API endpoint testing
- Cross-browser compatibility
- Mobile responsiveness
- Arabic RTL layout verification

7.2. Security Measures

Implemented Security

Measure	Implementation
Authentication	JWT via Sanctum, bcrypt password hashing
Authorization	Role-based middleware
SQL Injection	Eloquent ORM parameterized queries
XSS Protection	React automatic escaping
CORS	Configured for API access
Rate Limiting	API endpoint protection
Input Validation	Zod schema validation
Token Security	HTTP-only cookies

7.3. Performance Optimizations

Frontend

- **Turbopack:** Next.js build optimization
- **Code Splitting:** Automatic route-based splitting
- **Image Optimization:** Next.js Image component
- **Lazy Loading:** Dynamic imports for large components

- **Font Loading:** Modern WOFF2 format

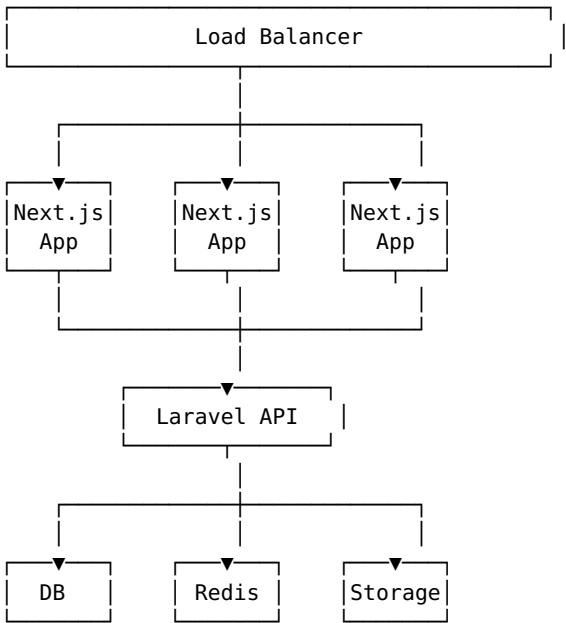
Backend

- **API Caching:** Job search results
 - **Eager Loading:** Eloquent relationship optimization
 - **Queue System:** Background job processing
 - **Database Indexing:** Strategic index placement
 - **Pagination:** Large dataset handling
-

8. Deployment & Documentation

8.1. Deployment Architecture

Production Stack



Environment Configuration

- .env files for frontend and backend
- Separate development and production configs
- Secure credential management

8.2. Source Code Repository

Repository: GitHub (Private)

Folder Structure

```
/ACE
├── frontend/
│   ├── app/
│   ├── components/
│   ├── context/
│   ├── hooks/
│   └── lib/
└── # Next.js 15 application
    # App Router pages
    # React components
    # Context providers
    # Custom hooks
    # Utilities
```

		locales/	# i18n translations
		public/	# Static assets
		backend/	# Laravel 12 API
		app/	# Application logic
		database/	# Migrations & seeders
		routes/	# API routes
		resources/	# Configuration
		three/	# 3D assets
		docs/	# Documentation

8.3. User Manual

Getting Started

1. **Access the Platform:** Navigate to the ACE website
2. **Create an Account:** Register as Student, University Student, Teacher, Company, or Parent
3. **Verify Email:** Complete OTP verification
4. **Complete Profile:** Fill in required information
5. **Explore Features:** Access role-specific features

Student Guide

- Browse courses in the catalog
- Enroll using Stripe or PayPal
- Track progress in My Courses
- Join live sessions at scheduled times
- Use AI Mentor for career guidance
- Allow parents to monitor progress

University Student Guide

- Build comprehensive profile with CV
- Add skills, experience, and certifications
- Browse and apply for jobs
- Track application status
- Use AI Mentor for career planning
- Make profile public for recruiters

Teacher Guide

- Create courses with lessons
- Schedule live sessions
- Conduct classes via video streaming
- Track student progress and attendance
- View analytics and reports

Company Guide

- Register and verify company
- Post job openings
- Review applications
- Download candidate CVs
- Update application statuses
- Use AI for recruitment insights

Parent Guide

- Send follow requests to children
- Monitor course progress
- View session attendance

- Track academic achievements

8.4. Technical Documentation

API Endpoints

Authentication

POST	/api/register	- User registration
POST	/api/login	- User login
POST	/api/logout	- User logout
POST	/api/forgot-password	- Password reset request
POST	/api/reset-password	- Password reset
POST	/api/verify-email	- Email verification

Courses

GET	/api/courses	- List courses
GET	/api/courses/{id}	- Course details
POST	/api/courses	- Create course (Teacher)
PUT	/api/courses/{id}	- Update course (Teacher)
DELETE	/api/courses/{id}	- Delete course (Teacher)
POST	/api/courses/{id}/enroll	- Enroll in course

Jobs

GET	/api/jobs	- List jobs
GET	/api/jobs/{id}	- Job details
POST	/api/jobs	- Create job (Company)
PUT	/api/jobs/{id}	- Update job (Company)
DELETE	/api/jobs/{id}	- Delete job (Company)

Applications

GET	/api/applications	- List applications
POST	/api/applications	- Submit application
GET	/api/applications/{id}	- Application details
PUT	/api/applications/{id}	- Update status (Company)

Live Sessions

GET	/api/sessions	- List sessions
POST	/api/sessions	- Create session (Teacher)
GET	/api/sessions/{id}/token	- Get Agora token
POST	/api/sessions/{id}/join	- Join session

AI Mentor

POST	/api/ai/chat	- Send message
GET	/api/ai/conversations	- Get conversation history

Conclusion

ACE (Access to Careers & Education) represents a comprehensive solution to bridge the gap between education and employment. The platform successfully integrates:

- **Learning Management System** with course creation, enrollment, and progress tracking

- **Job Platform** with posting, application, and recruitment management
- **Live Classes** via Agora RTC for real-time education
- **AI Career Mentor** powered by Google Gemini for personalized guidance
- **Payment Processing** through Stripe and PayPal
- **Identity Verification** via Didit for secure onboarding
- **Multi-language Support** with full Arabic and English localization

Key Achievements

- 6 distinct user types with tailored experiences
- 31 database migrations supporting robust data architecture
- Real-time features including video streaming and notifications
- AI-powered career guidance and job matching
- Secure, scalable, and maintainable codebase

Technology Excellence

- Modern stack: Next.js 15 + React 19 + Laravel 12
- TypeScript for type safety
- Tailwind CSS for responsive design
- Comprehensive third-party integrations

ACE establishes a new paradigm for educational technology platforms, demonstrating that learning and career development can be seamlessly unified into a single, powerful ecosystem.

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