JSS PLACEMENT PORTAL

Project Examination Report

Final Year Engineering Project

January 2026

SECTION 1: PROJECT OVERVIEW

Project Title

JSS Placement Portal with AI-Powered Career Guidance System

Problem Statement

The project addresses challenges in campus recruitment:
- Fragmented placement processes
- Manual resume screening
- Lack of career guidance
- Poor interview preparation
- Inefficient communication

Target Users

- Students: Browse jobs, apply, use AI tools
- Faculty: Monitor placements, reports
- Recruiters: Post jobs, screen candidates

Core Features

- Multi-Role Authentication with JWT
- Job Management & Application Tracking
- AI Resume Analyser (NLP-based)
- AI Career Coach (Gemini-powered)
- Mock Interview System
- Portfolio Builder (LinkFolio)
- Placement Analytics Dashboard

Technology Stack

Frontend: React 18, Vite, Redux Toolkit, TailwindCSS
Backend: Node.js, Express.js
Database: MongoDB Atlas with Mongoose
AI/ML: Python (spaCy, NLTK), Google Gemini API
File Storage: Cloudinary CDN

SECTION 2: SYSTEM ARCHITECTURE

Architecture Overview

CLIENT LAYER:
- React SPA (Port 5173) - Main portal
- Streamlit (Port 8501) - AI Resume Analyser
- Next.js (Port 3000) - AI Career Coach

API LAYER:
- Express.js Backend (Port 8000)

DATA LAYER:
- MongoDB Atlas, Cloudinary, Google Gemini

Authentication Flow

1. User submits credentials
2. POST /api/v1/user/login
3. Validate with bcrypt.compare()
4. Generate JWT
5. Set HTTP-only cookie
6. Store user in Redux
7. Navigate to dashboard