Code Connect - AI Hiring Manager

Project Report

1. Introduction

1.1 Project Overview

Code Connect is an **AI-powered hiring platform** designed to connect **Pakistani IT professionals** with **German hiring managers** seamlessly. It eliminates the need for traditional resume submissions by leveraging **LinkedIn profile extraction and AI-driven job matching.**

1.2 Team Members

- **Zainab Hassan** - Website Designer
- **Areeba Shahzadi** - Developer
- **Fatima Hassan** - Technical Writer

1.3 Objective

The main goal of this project is to simplify and automate the hiring process for IT professionals by using **AI for profile analysis, job matching, and recruitment automation.**

2. Designing Phase

2.1 Tools Used

- **Figma** - UI/UX design for both desktop & mobile versions
- **Adobe Illustrator & Photoshop** - Visual elements & branding

- **Canva** - Marketing materials (brochures, posters)

2.2 Website Structure & Wireframing

The platform consists of **30+ pages**, including the following key sections:

2.2.1 Landing Pages & User Authentication

1. **Landing Page (Show More/Less option)** – Introduces Code Connect, its benefits, and a CTA (Call to Action) for users.
2. **Home Page** – Contains search functionality and job recommendations.
3. **Sign In / Sign Up** – Users can register via **LinkedIn login (no resume upload required).**
4. **Forgot Password / Reset Password** – Allows users to recover access if needed.

2.2.2 AI Profile Extraction & Editing

5. **AI-Extracted Profile** – Automatically pulls data from LinkedIn, including:
    - Name, Email, Username
    - Expertise & Skills
    - Work Experience
    - Education
    - Certifications
    - Awards
    - Projects
    - Languages
    - LinkedIn URL
    - Profile Picture
6. **Edit Profile** – Users can modify their AI-extracted details if needed.

2.2.3 AI-Based Job Matching & Application Process

7. **Job Listings Page** – Displays job openings tailored to the user's skill set.
8. **Company Job Template** – Each job post includes:

- o Job Title
- o Company Name
- o Location
- o Salary Range
- o Job Type (Remote/On-site)
- o Description & Requirements

9. **Apply Now** – Users can directly apply with a **single click.**
10. **Application Status** – Tracks applications with statuses:

- Under Review
- Interview Scheduled
- Rejected
- Offer Accepted

2.2.4 AI Skill Assessment

11. **AI-Based Quiz** – 30-minute technical assessment with **20 coding questions.**
12. **Ranking System** – Generates results based on AI evaluation.

2.2.5 Interview & Selection

13. **Live Interview Module** – Video interview feature with options to:

- Mute/unmute audio
- Enable/disable video
- Screen sharing

14. **Offer Confirmation & Job Letter** – Final hiring step with email confirmation.

3. Development Phase

3.1 Technology Stack

- **Backend:** Python, Django (Web Framework)
- **Frontend:** HTML, CSS, Bootstrap, JavaScript
- **Database:** SQLite (Development), PostgreSQL (Production)
- **AI Integration:** OpenAI API (Job Matching, Chatbot)

3.2 Development Process

3.2.1 Setting Up the Project

- Installed **Django framework** & created a **virtual environment.**
- Configured **database settings** & user authentication system.

3.2.2 AI-Based Profile Extraction

- Developed **LinkedIn API integration** to extract user details.
- Built an **editable profile page** for users to modify extracted data.

3.2.3 Job Posting & Search

- Created a **Job Model** to store job details.
- Developed **job filtering & AI-based recommendation system.**
- Implemented **dynamic job searches** based on user skills.

3.2.4 AI Skill Assessment

- Designed a **quiz system** to evaluate coding skills.
- Implemented **ranking logic** based on AI assessment.

3.2.5 Interview & Selection Process

- Built **live video interview functionality** with real-time interactions.
- Developed **application status tracking** for users.
- Automated **offer letter generation & email notifications.**

3.2.6 AI Recruiter Chatbot

- Implemented **OpenAI-based chatbot** to assist recruiters.
- Chatbot suggests candidates & hiring strategies based on AI analysis.

4. Deployment & Final Testing

4.1 Testing Process

- Conducted **unit testing** for each module.
- Performed **user testing** to ensure smooth navigation.
- Fixed UI/UX bugs & enhanced **mobile responsiveness.**

4.2 Deployment

- Hosted the platform on **AWS / Heroku** for live access.
- Configured **SSL certificates & domain settings** for security.

5. Challenges & Solutions

Challenge	Solution
Integrating AI for profile extraction	Used **LinkedIn API & AI parsing algorithms**
Job recommendation accuracy	Implemented **Django QuerySet filtering & AI-based similarity matching**
Secure user authentication	Used **Django's built-in authentication with OAuth2 for LinkedIn**
Scalability for large job listings	Optimized **database queries & caching**

6. Future Scope

- **Expand to Other Industries** – Extend beyond IT to healthcare, finance, and engineering.
- **AI Resume Builder** – Generate resumes based on extracted data.
- **Mobile App Development** – Launch Android/iOS versions with better UI/UX.
- **Multi-Language Support** – Include German & Urdu for a global audience.
- **Blockchain-Based Verification** – Secure user data and prevent fraud.

7. Conclusion

Code Connect successfully bridges the gap between **Pakistani IT professionals** and **German employers** using **AI-driven automation.** With an efficient hiring system, AI-powered skill assessment, and real-time job recommendations, the platform revolutionizes the recruitment process. Future expansions will further enhance usability and accessibility, making **global hiring faster and more efficient.**