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TITLE PAGE

- **Theme- Open Innovation**
- **Topic Name -** AI-Powered Resume & Interview Analyzer
- **Category- Software**
- **Team ID- T-166**
- **Team Name (One line Coders)**



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IDEA TITLE: ZyberCV

- ❖ We propose an AI-driven platform that helps job seekers improve their **resumes and interview skills** through **intelligent analysis** and **real-time feedback**.

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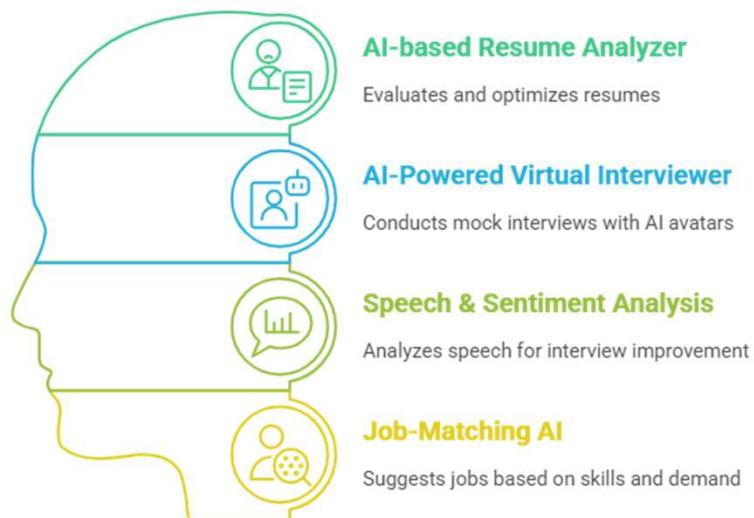
Solution

- ❖ Our solution consists of:
 - ✓ **AI-based Resume Analyzer** – Evaluates resumes, scores them, and suggests improvements based on keyword optimization and industry trends.
 - ✓ **AI-Powered Virtual Interviewer** – Conducts mock interviews using AI avatars, assessing communication skills, confidence, and clarity.
 - ✓ **Speech & Sentiment Analysis** – Analyzes tone, speech pace, and clarity to provide constructive feedback for interview improvement.
 - ✓ **Job-Matching AI** – Suggests suitable job opportunities based on the candidate's resume, skills, and industry demand.

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Solution

Comprehensive AI Recruitment Solution



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TECHNICAL APPROACH

Our platform will be built using the following technologies:

- Frontend:** React (Vite) + Tailwind CSS → Ensures a fast, interactive, and responsive user interface.
- Backend:** Python (Flask) → Handles AI processing, resume analysis, and API interactions.
- AI & NLP Models:**
 - OpenAI/GPT for resume analysis and job recommendations.
 - Speech processing APIs for interview feedback.
- Database:** MySQL → Stores user data, resumes, and interview insights.
- Hosting & Deployment:** Vercel → Ensures scalability and performance.

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TECHNICAL APPROACH

Frontend (Client Side)

- **Technology:** React (Vite) + Tailwind CSS
- **Deployment:** Vercel

Backend (Server Side)

- **Technology:** Flask (Python)
- **Deployment:** Vercel (serverless functions)

Database & Storage

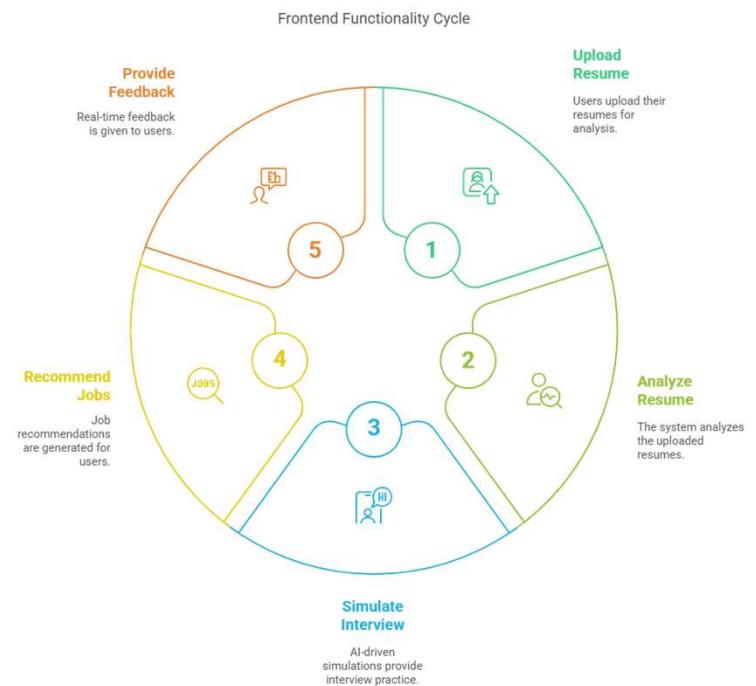
- **Database:** Supabase (PostgreSQL-based)

AI/ML Components

- **Resume Analyzer:** Gemini API (Google AI) for NLP-based keyword extraction
- **Interview Simulator:** Speech-to-text + sentiment analysis via Gemini API
- **Job Recommendation Engine:** ML-based model using Gemini API embeddings

Authentication & Security

- **User Authentication:** Supabase Auth



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FEASIBILITY AND VIABILITY

Our AI-powered platform is highly feasible due to:

- Technological Availability:** AI models for NLP, speech analysis, and job matching are well-developed and accessible.
- Scalability:** The use of Vercel deployment ensures smooth scalability.
- User Demand:** Job seekers continuously look for AI-driven tools to enhance resumes and interview skills.
- Cost-Effectiveness:** Open-source frameworks (React, Tailwind, Python) reduce development costs.

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IMPACT AND BENEFITS

Potential Impact on the Target Audience

Our AI-powered Resume & Interview Analyzer will have a **significant impact on job seekers**, helping them:

- Create ATS-Friendly Resumes** – Ensures resumes pass automated screening systems used by recruiters.
- Boost Interview Confidence** – Provides real-time feedback on speech, tone, and body language.
- Improve Job Prospects** – Enhances resume optimization, increasing chances of landing interviews.
- Personalized Career Guidance** – AI-driven job recommendations tailored to individual skill sets.

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RESEARCH AND REFERENCES

- **AI Resume Analyzer** – Overview of AI-driven resume analysis and improvement.

<https://ijcrt.org/papers/IJCRT2312507.pdf>

- **AI Resume Analyzer using NLP** – Study on AI-powered resume evaluation techniques.

https://www.researchgate.net/publication/379230607_AI_Resume_Analyzer_using_Natural_Language_Processing

- **Resume Evaluation with NLP & LDA** – AI-based resume ranking approach.

<https://arxiv.org/abs/2307.15752>

- **LLM Agents in Recruitment** – AI-enhanced resume screening framework.

<https://arxiv.org/abs/2401.08315>

- **Conversate: AI Interview Simulation** – Interactive AI for interview preparation.

<https://arxiv.org/abs/2410.05570>

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Team Details

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