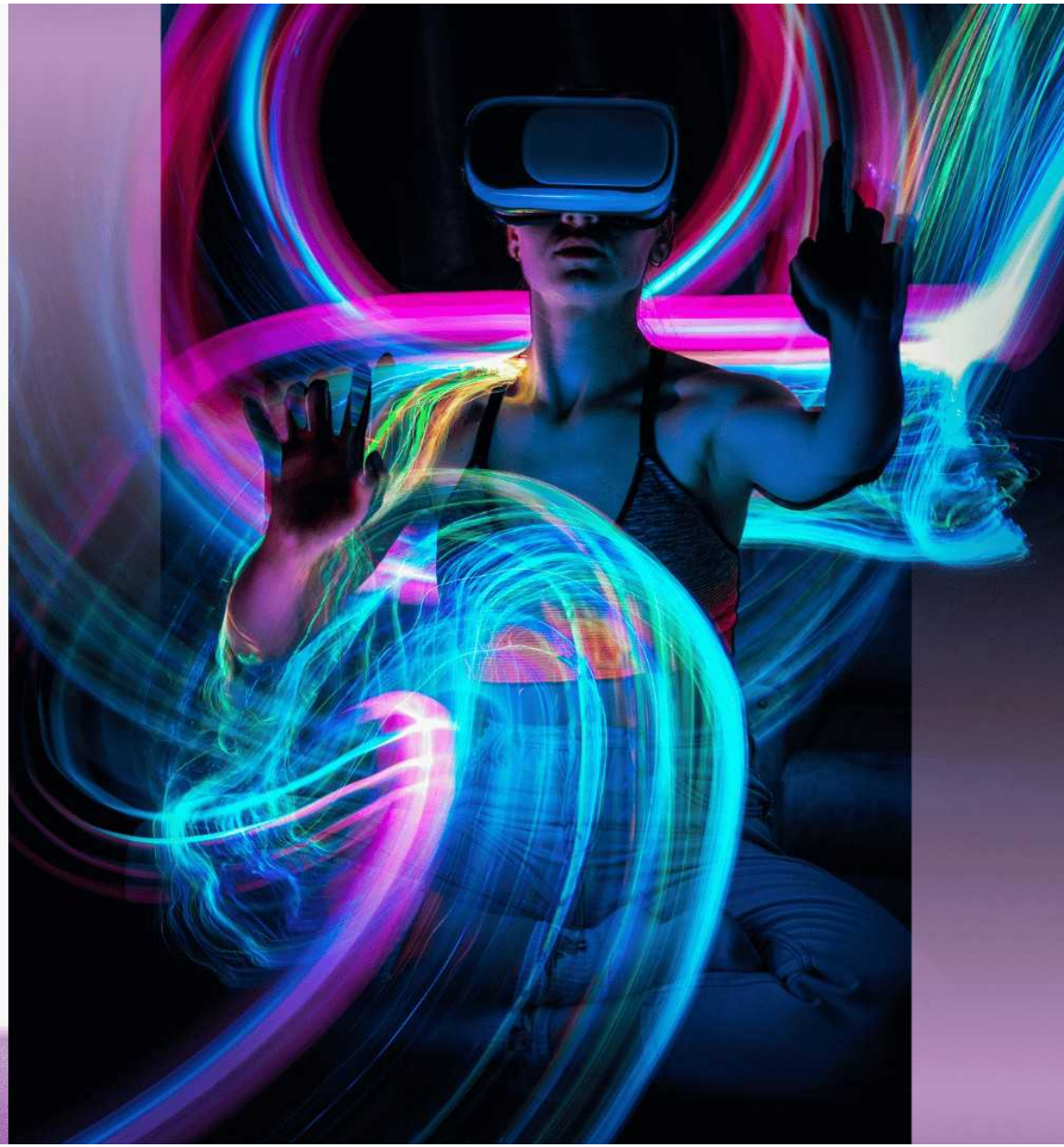
AI-Powered Resume &
Cover Letter Generator

Problem Statement

- Job seekers struggle to customize resumes for every role.
- Recruiters receive generic applications, reducing chances of shortlisting.
- Manual tailoring is time-consuming & inefficient.



Objective
AI-powered system

Analyzes job description & applicant's profile

Generates a customized resume highlighting relevant skills/experience.

Creates a professional cover letter tailored to the role

Core Features

Upload resume or LinkedIn profile.

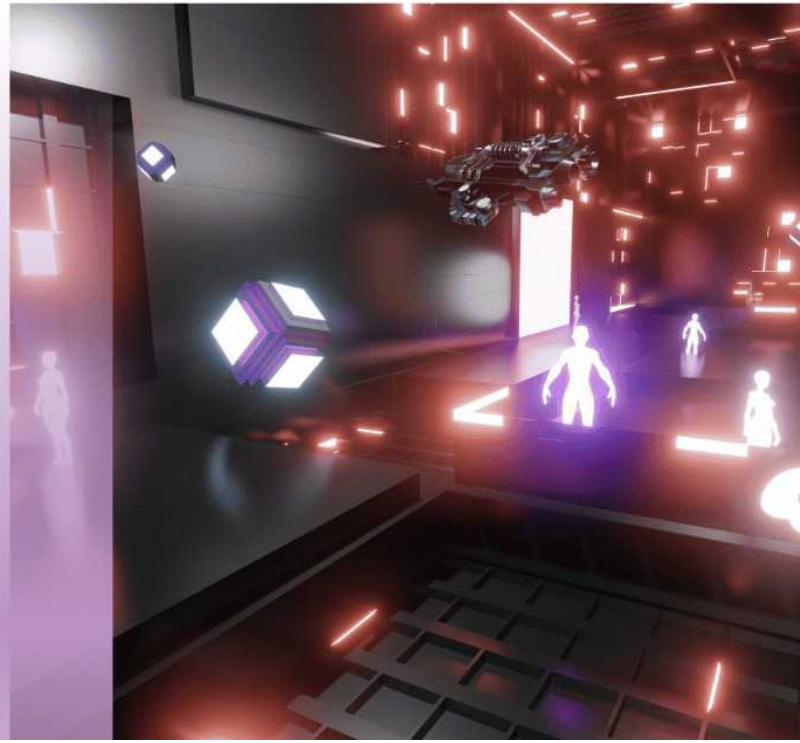
Paste job description of the target role.

AI extracts key requirements & matches with candidate's skills

Generate

Optimized Resume (ATS-friendly).

Tailored Cover Letter.



System Architecture

Frontend (Web App) :

Simple upload & input form.

Backend (FastAPI / Python :

Handles input & validation.

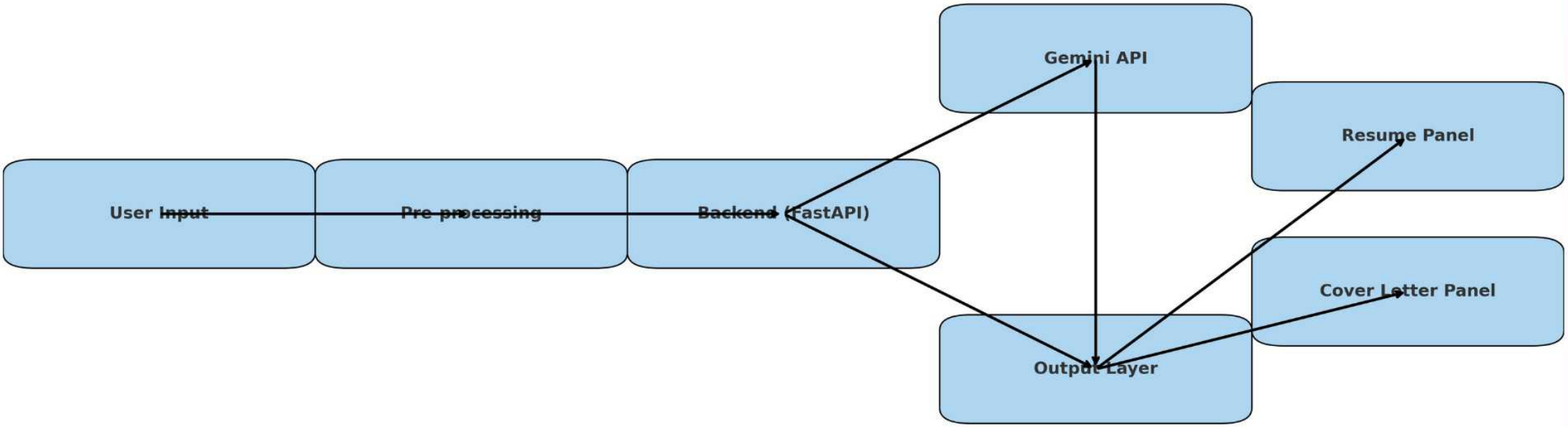
Sends prompts to Gemini API.

LLM (Gemini API) :

Customizes content, ensures relevance.

Output Layer :

Returns formatted Resume & Cover Letter.


Gemini API
Resume Panel
User Input
Pre-processing
Backend (FastAPI)
Cover Letter Panel
Output Layer

Tech Stack

- Frontend: HTML, CSS, Tailwind (or Streamlit for MVP).
- Backend: Python + FastAPI.
- LLM Integration: Google Gemini API.
- Libraries :
  - python-docx → Resume formatting
  - pypdf → PDF handling
  - dotenv → Secure API keys

Target Users

- Students & Freshers → Stand out in campus placements.
- Job Seekers → Tailor applications faster.
- HR & Career Services → Help candidates create professional documents.

Benefits

- Saves time by automating resume tailoring.
- Increases chances of ATS & recruiter shortlisting.
- Ensures professional, polished applications.
- Scalable for multiple industries/roles.

Future Scope

- Multi-language support for global jobs.
- Direct job portal integration (LinkedIn, Indeed).
- Resume scoring & feedback feature.
- AI-driven portfolio/LinkedIn optimization.

THANK YOU