A SYNOPSIS ON

Tailored CV for Jobs

Submitted in partial fulfilment of the requirement for the award of the degree of

MASTER OF COMPUTER APPLICATIONS

(OMC405 Capstone Project, Fourth Semester MCA)

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Project Proposal: Tailored CV for Jobs

1. Title of the Project

Tailored CV for Jobs
A Resume Tailoring Web Application Using GPT-4 and Streamlit

2. Introduction and Objectives

Introduction:
In the modern recruitment landscape, job seekers often struggle with creating resumes that align precisely with individual job descriptions. This mismatch affects their visibility in Applicant Tracking Systems (ATS) and reduces their chances of getting shortlisted. The project, *Tailored CV for Jobs*, addresses this challenge by automating the resume customization process using GPT-4 and NLP techniques.

Objectives:

- Build a web-based interface for users to input job descriptions and existing resumes.
- Analyze job descriptions and generate personalized resumes using GPT-4.
- Increase resume compatibility with ATS by embedding relevant keywords.
- Save time and effort in manually tailoring resumes.
- Ensure data validation and user-friendly interactions.

3. Project Category

Artificial Intelligence (AI)
Sub-domain: Natural Language Processing (NLP) & Machine Learning

4. Tools/Platform, Hardware, and Software Requirements

Development Tools & Platforms:

- Language: Python 3.8+
- Framework: Streamlit 1.3+
- Model/API: GPT-4 (via OpenAI API)
- Version Control: Git, GitHub
- Cloud Deployment: AWS EC2 (initial), Streamlit Share (final)

Hardware Requirements:

- EC2 instance (t2.medium): 2 vCPUs, 4 GB RAM
- Developer machine: Intel i5, 8 GB RAM, 256 GB SSD
- Backup: 1TB External HDD

Software Requirements:

- Ubuntu 20.04 LTS
- Visual Studio Code
- Web browser for deployment access

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5. Problem Definition and Requirement Specifications

Problem Definition:
Manual resume tailoring is time-consuming and prone to errors. Most resumes fail to highlight key skills and are not optimized for ATS, reducing the candidate's visibility.

Functional Requirements:

- Input fields for resumes and job descriptions
- AI-generated tailored resume output
- Download/export option
- Support for multiple resume sections (Work Experience, Skills, etc.)

Technical Requirements:

- Use NLP techniques for text analysis and keyword extraction
- Integration with GPT-4 for text generation
- API handling for resume/job description inputs

Input: Raw resume and job description
Process: Keyword extraction → GPT-4 prompt → Resume generation
Output: Tailored resume ready for download or edit

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6. Project Planning and Scheduling

Project Schedule (Gantt Chart Overview):

Phase	Timeline
Requirement Analysis	Week 1
Research & Tool Selection	Week 2
UI/UX Design	Week 3
Backend Logic (GPT-4, NLP)	Week 4–5
Integration & Testing	Week 6
Deployment (Streamlit)	Week 7
Documentation	Week 8

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7. Scope of the Solution

Included Features:

- Upload/paste resume and job descriptions
- Real-time tailored resume generation
- Compatibility with ATS
- Web-accessible UI using Streamlit

Limitations:

- Requires OpenAI API key (user-supplied)
- Internet dependency for GPT-4 access
- Currently supports only English resumes

Deliverables:

- Web application on Streamlit
- Source code (GitHub)
- Project documentation and user manual

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8. Future Scope and Enhancements

- Integration with LinkedIn or resume builders (like Canva)
- Support for multiple languages
- PDF parsing and generation
- AI-based job recommendation system
- AI-powered feedback on tailored resumes

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9. Bibliography

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