PROJECT CHARTER

GENERAL PROJECT INFORMATION

PROJECT NAME: AI-Powered Resume Screening & Bias Reduction System
PROJECT MANAGER: Ranya Saidi
PROJECT SPONSOR: Saif Eddine Ben Hadj Kacem
EMAIL: [Your Email]
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ORGANIZATIONAL UNIT(S): Business & Data Science Department

EXPECTED START DATE: February 2, 2025
EXPECTED COMPLETION DATE: May 20, 2025

PROJECT OVERVIEW

PROBLEM OR ISSUE:
Traditional hiring is time-consuming, costly, and prone to unconscious bias. Companies struggle to filter through large resume pools fairly and efficiently. Bad hires lead to financial loss and reduced efficiency.

PURPOSE OF PROJECT:
To develop an AI-powered hiring system that automates resume screening, eliminates bias, ranks candidates based on qualifications, and integrates pre-employment tests (IQ, analytical thinking, technical skills). This system will reduce hiring costs and improve job matching accuracy.

BUSINESS CASE:

- Hiring agencies lose money when candidates don't stay in positions.
- Companies want faster and data-driven hiring decisions.
- AI automation will reduce screening time and ensure better job matching.
- Reduces financial losses due to poor hires and increases success fees for hiring agencies.

GOALS / METRICS

Project Goals:

- Automate resume screening to reduce hiring time by 50%.
- Improve the quality of hires by integrating skill-based testing.
- Reduce hiring bias by implementing blind screening techniques.
- Increase the success fee rate by ensuring better candidate-job fit.

Key Performance Indicators (KPIs):

- Hiring time reduction (compare pre- and post-AI implementation)
- Candidate success rate (how many stay beyond probation)
- Bias reduction (analyze diversity metrics before/after AI adoption)
- Cost savings in recruitment (hours saved by AI processing resumes)

EXPECTED DELIVERABLES

1. AI Model for Resume Screening – Uses NLP to extract skills, experience, and job fit.
2. Bias-Free Hiring Dashboard – Shows ranked candidate profiles with anonymized data.
3. Pre-Employment Testing Integration – Assigns skill-based tests and displays results.
4. Final Report & Business Case – Demonstrates cost savings and efficiency improvements.

PROJECT SCOPE

WITHIN SCOPE:

- Resume parsing using NLP (Natural Language Processing).
- Candidate ranking based on skills, experience, and pre-employment test results.
- Bias removal (removing name, gender, ethnicity from resumes).
- Integration with an HR dashboard for recruiters.

OUTSIDE OF SCOPE:

- The final hiring decision remains with human recruiters.
- Legal or ethical hiring regulations beyond the scope of the AI tool.
- Live deployment in a corporate setting (unless further developed).

TENTATIVE SCHEDULE

KEY MILESTONE	START DATE	FINISH DATE
Form Project Team & Scope Definition	February 2, 2025	February 10, 2025
Data Collection & Preprocessing	February 11, 2025	February 20, 2025
Model Development & Testing	February 21, 2025	April 10, 2025

Bias Evaluation & Mitigation	April 11, 2025	April 20, 2025
Dashboard Development	April 21, 2025	May 5, 2025
Final Testing & Refinements	May 6, 2025	May 15, 2025
Project Submission & Presentation	May 20, 2025	May 20, 2025

RESOURCES

PROJECT TEAM:

- Ranya Saidi – Data Scientist & Project Manager
- Saif Eddine Ben Hadj Kacem – Machine Learning Engineer

SUPPORT RESOURCES:

- University Professors (Advisors)
- AI & Data Science Tools (Python, TensorFlow, Scikit-Learn)
- Cloud Computing Resources (Google Cloud, AWS)

COSTS

COST TYPE	VENDOR / RESOURCE	AMOUNT
Cloud Computing (AWS/GCP for Model Training)	Google Cloud / AWS	$300
Software & Tools (APIs, Libraries)	Python, TensorFlow, OpenAI API	Free/Open Source
Data Storage & Processing	Cloud Storage / Local Server	$150
Web Hosting (Dashboard Deployment)	Firebase / AWS	$100
Miscellaneous (Research, Testing, Reports)	External Consultancy & Study Materials	$200
Total Estimated Cost	**-**	**$750**

BENEFITS AND CUSTOMERS

PROCESS OWNER: Hiring Agencies & HR Teams
KEY STAKEHOLDERS: Recruiters, Hiring Managers, Companies
FINAL CUSTOMERS: Organizations looking for AI-assisted hiring solutions

EXPECTED BENEFITS:

- Faster hiring – Reduces screening time from weeks to minutes.
- Bias elimination – Hiring decisions based on skills, not identity.
- Higher job success rate – Ensures the right candidates are placed.
- Cost savings – Reduces recruiter workload and financial loss from bad hires.

REAL-WORLD HIRING AGENCY COST ANALYSIS

Hiring agencies typically operate on a success fee model, meaning they get paid only if a candidate is successfully placed. This works as follows:

- **Initial Placement Fee:** Agency gets 15-25% of the hired candidate's annual salary when they are placed.
- **Retention Fee:** If the candidate stays for 3-4 months, the agency gets another portion of the salary.
- **Losing Money on Bad Matches:** If the hire fails (quits early or is not a fit), the agency may need to refund part of the success fee, leading to financial loss.

With AI:

- Better candidate-job matching = More hires stay longer = Higher agency profits
- Faster screening = More candidates processed = More potential hires
- Bias removal = More diverse hiring & reduced discrimination risks

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RISKS, CONSTRAINTS, AND ASSUMPTIONS

RISKS:

- Data Bias – AI could learn existing hiring biases if not properly trained.
- Legal Considerations – AI must comply with recruitment laws and policies.
- Accuracy – AI might not always perfectly match candidates to jobs.

CONSTRAINTS:

- Limited Training Data – High-quality, diverse resume datasets are needed.
- Computing Power – AI models require high-performance hardware.

ASSUMPTIONS:

- AI-powered recommendations will improve hiring efficiency.
- Companies will trust and use AI screening results.

PREPARED BY

NAME: Ranya Saidi & Saif Eddine Ben Hadj Kacem
TITLE: Data Scientists & Machine Learning Engineers
DATE: February 2, 2025
