SkillMate+: An Inclusive AI Career Coach for Rural India

Project Title

SkillMate+: An Inclusive AI Career Coach for Rural India

Track

Hard Track - LLM Fine-Tuning for Impact

Domain

Employment & Skilling, Rural Development, Vernacular AI

Problem Statement

Millions of rural youth in India lack access to personalized career guidance, interview preparation, and skilling information in their local language. Due to limited digital literacy and guidance infrastructure, they miss opportunities for job readiness and self-employment.

Proposed Solution

SkillMate+ is an AI-powered, fine-tuned career guidance assistant for rural and semi-literate job seekers. It interacts in Odia/Hindi, understands user interests and skills, and provides:

- Personalized job role suggestions

- Resume building support

- Mock interview simulations with AI feedback

- Links to government skilling schemes (PMKVY, DDU-GKY)

It includes voice-based input/output and supports natural dialogue using a fine-tuned LLM.

Innovation & Tech Stack

- Fine-tuned LLM using QLoRA/PEFT for job-matching and interview Q&A

- Whisper ASR for voice input, Google TTS for Odia/Hindi speech output

- RAG-based scheme linker for PMKVY and NSDC job roles

- Resume generator using HTML2PDF

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- Frontend via Streamlit with multilingual support

Impact

SkillMate+ aims to democratize career mentorship for underserved Indian youth, bridging language and access barriers. It promotes employment-readiness, skill awareness, and confidence-building using culturally-sensitive GenAI agents.