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Project Title: AI-Enhanced Career Guidance System for Personalized Career Pathways

Abstract

Career guidance is a critical component of educational and professional development, yet many individuals struggle to find the right career path that aligns with their skills, interests, and long-term goals. Traditional career counseling methods often lack personalization and may not fully account for an individual's unique profile, including their aptitude, aspirations, abilities, and past experiences. We provide a novel AI-Enhanced Career Guidance System designed to provide personalized career pathways for students. Leveraging advanced machine learning algorithms, the system analyzes a wide array of data, including academic performance, skills assessment, personality traits, and market trends. By integrating natural language processing and predictive analytics, the system delivers tailored recommendations that empower students to make informed decisions about their future careers. The system has broad applications across various sectors, including educational institutions, career counseling centers, corporate HR departments, government workforce programs, online career platforms, and personal development tools. Key features include AI-driven aptitude assessment, analysis of aspirations and interests, ability and experience mapping, and identification of future progression opportunities. The system highlights skill gaps and suggests targeted learning opportunities, ensuring that recommendations remain relevant in a rapidly evolving job market. This research contributes to the field of smart education by providing an innovative solution that bridges the gap between education and the workforce, ultimately fostering a generation of well-prepared professionals. Through this AI-driven approach, we aim to develop an intuitive, user-friendly interface that makes the career guidance process accessible and engaging for users at all levels, from students exploring initial career options to professionals considering a change or advancement.

Signature of
Guide

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