NextStep: A Smart System-Based Career Guidance Application for Students in the Computing Field Based on the RIASEC Model

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This paper presents the development of a Smart System based career guidance application specifically designed for students in the computing field. With the increasing complexity of technology-related careers, students often require personalized guidance to choose a career path that aligns with their skills and preferences. This application integrates an expert system and skill assessment tests to offer tailored career recommendations and resources to guide the students in specific career paths. The expert system is based on the RIASEC model, a standardized career classification framework and enhanced by industry insights which evaluates a student's responses to provide a best-fit career path, while the skill assessment further categorizes the user's proficiency level in their chosen field. The application is built with a Drools-based expert system that aligns user characteristics with relevant career paths. Evaluation through user surveys and expert feedback has shown a promising user satisfaction rate of 85% and approximately 90% accuracy in providing desired career recommendations, demonstrating the application's effectiveness in enhancing student engagement and career readiness. This research project fills a critical gap in personalized career counseling, offering students a data-driven, interactive tool for informed career decision-making.

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