Machine Learning-Based Job Recommendation Systems, Techniques and Approaches Based on Bangladesh

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***Abstract*— In Bangladesh, fresh graduates face a tough job market, with far more candidates than available positions. Many traditional job search methods depend heavily on matching keywords, but these often miss the mark when it comes to truly connecting people with roles that fit their skills and career goals. This study looks at a new job recommendation system that combines different machine learning techniques, like content-based and collaborative filtering, to make job matching smarter and more accurate. By incorporating natural language processing, deep learning, and career path analysis, the system aims to offer recommendations that feel more personalized and relevant. We experimented with different machine learning models, using data from job sites, resumes, and hiring trends. Out of all the models, decision trees stood out, achieving an accuracy of 88%. These findings show that AI can help make the job search easier by cutting down on manual work and improving match quality. That said, the system isn't perfect yet. Moving forward, we plan to refine the deep learning parts, improve how NLP is used, and bring in more varied data to make the recommendations even better.**

***Keyword*— Machine Learning, Decision Tree, Logistic Regression, Naive Bayes.**

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