

Predicting Engineering and Technology Job Market Trends: A Demographic Analysis

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Abstract: *In the evolving landscape of engineering and technology, understanding job market dynamics is crucial for bridging the gap between industry demands and workforce readiness. This research presents a comprehensive system for predicting engineering and technology job market trends through a demographic analysis model. The proposed platform integrates three distinct user roles: users (job seekers), recruiters, and administrators, each with dedicated functionalities to enhance interaction and data management. The study leverages real-time and historical job data sourced from job portals, analysing key attributes such as skills, salary, location, and job roles. By incorporating demographic filtering, the system offers location-specific insights that highlight regional employment trends. Advanced data visualization tools are utilized to generate interactive graphs that depict correlations between in-demand skills and salary distributions across various cities and regions. Furthermore, predictive analytics techniques are applied to forecast future job trends, supporting data-driven decision-making for academic institutions, job seekers, and recruiters. The admin module ensures secure and efficient system management, maintaining data integrity and access control. This research aims to provide a scalable and insightful solution for addressing mismatches in the engineering and technology job market, ultimately contributing to a more informed and adaptable employment ecosystem.*

Keywords: evolving landscape

