Career recommendations from psychological characteristics: a bayesian approach.

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Abstract

Objective. Individuals thrive in occupations for which their personality matches job's requirements (Judge Zapata, 2014). However, people struggle making decisions about career paths. This study proposes to develop a career recommendation system based on personality and motives.

Methods. Through the analysis of 280 000 workers (working on 300 different occupations) who took online psychometric tests measuring work-related personality traits and motives, our method: (1) leverages bayesian statistics and machine learning to perform density estimation to identify the most relevant jobs for an individual, (2) take advantage of NLP (Natural Language Processing) to evaluate distance between jobs and refine recommendations depending on the individual's career objectives.

Results. We tested several algorithms. Models were benchmarked on a test set using error based and ranking based methods. Results demonstrate the benefits of ML to provide accurate career recommendations.

Conclusion. Our work will help each one create a better and tailored career path.