Predicting Educational Relevance For an Efficient Classification of Talent

PERFECT Algorithm Engine

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ABSTRACT

This research work utilizes machine learning approach to build a predictive model for the prediction of the students and the job seekers' to quantify their fitness's for the courses and jobs they plan to pursue, respectively. Some of the existing research utilizes GPA for academic prediction and use personality prediction and computing in social domains for various industrial goals. On the other hand, this research work advances the state of the art to correlate and blend the personality features with the academic attributes to identify and classify the relevant talent of the individuals for the academic and real world success with improved predictive modeling. This work incorporates three algorithms to quantify a talent in the relevance, and then predict good fit students and good fit candidates, based on supervised learning, stochastic probability distribution and classification rules, etc. This work opens many opportunities for future research towards Genomics data mining to mine individuals for various areas.

INTRODUCTION

We are what we generate. We have seen the huge data generation and data becoming so much public by billions of online users in last two decades. This has promoted tremendous research in the personality data mining, prediction and classification to support customized ads and marketing. In recent years, healthcare and academia prediction have necessitated utilization of e-data to put it to real world usage and helped improve existing data mining techniques and algorithms. This motivates the research introduced here, towards prediction of the students and job seekers. This work introduces math models in conjunction with frameworks and algorithms. Two Frameworks and Results are briefly presented here to understand the internals and mechanics of the research work, in conjunction with the related math equations of the overall model and the engine, known as PERFECT Algorithm Engine (PAE)
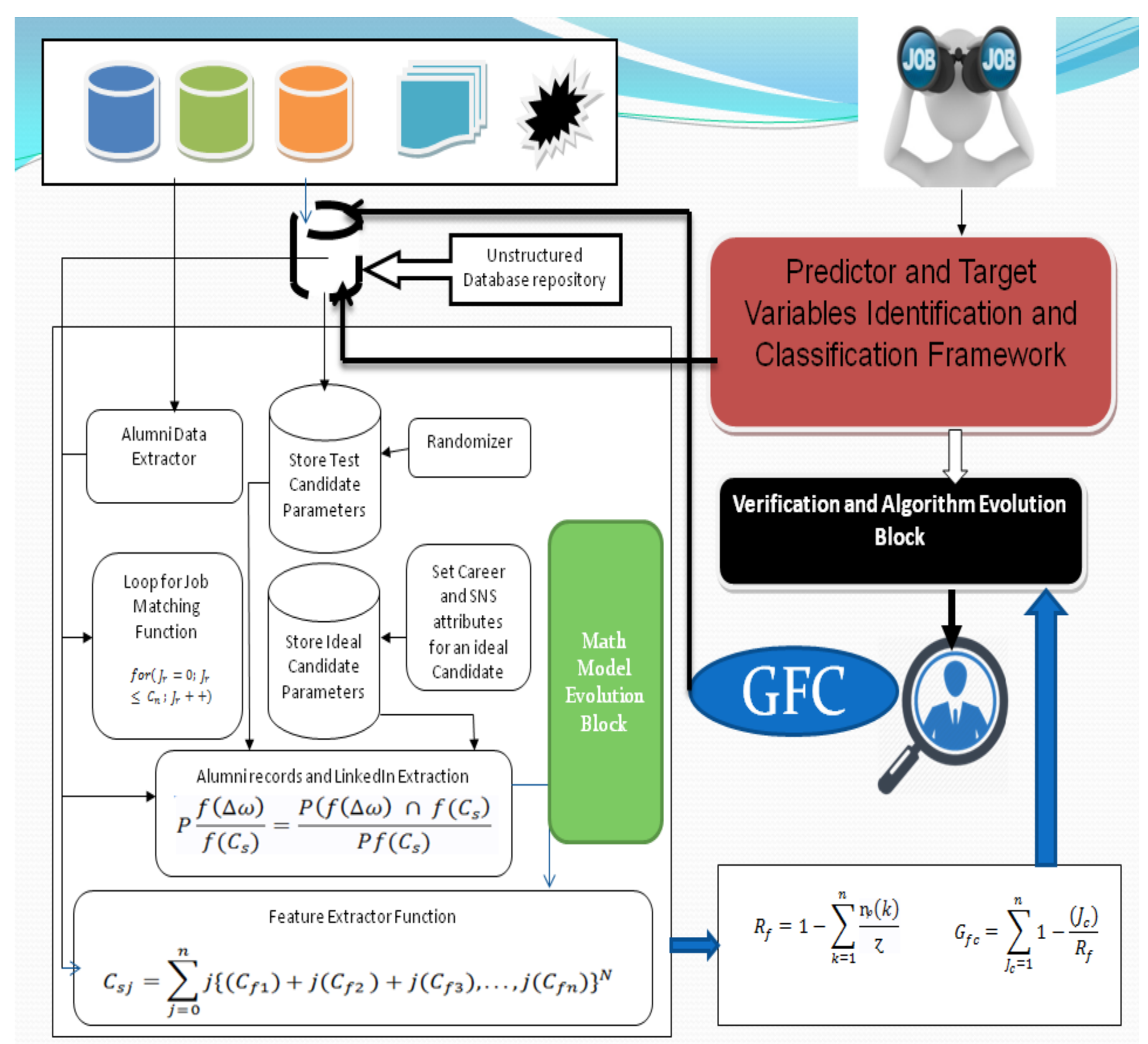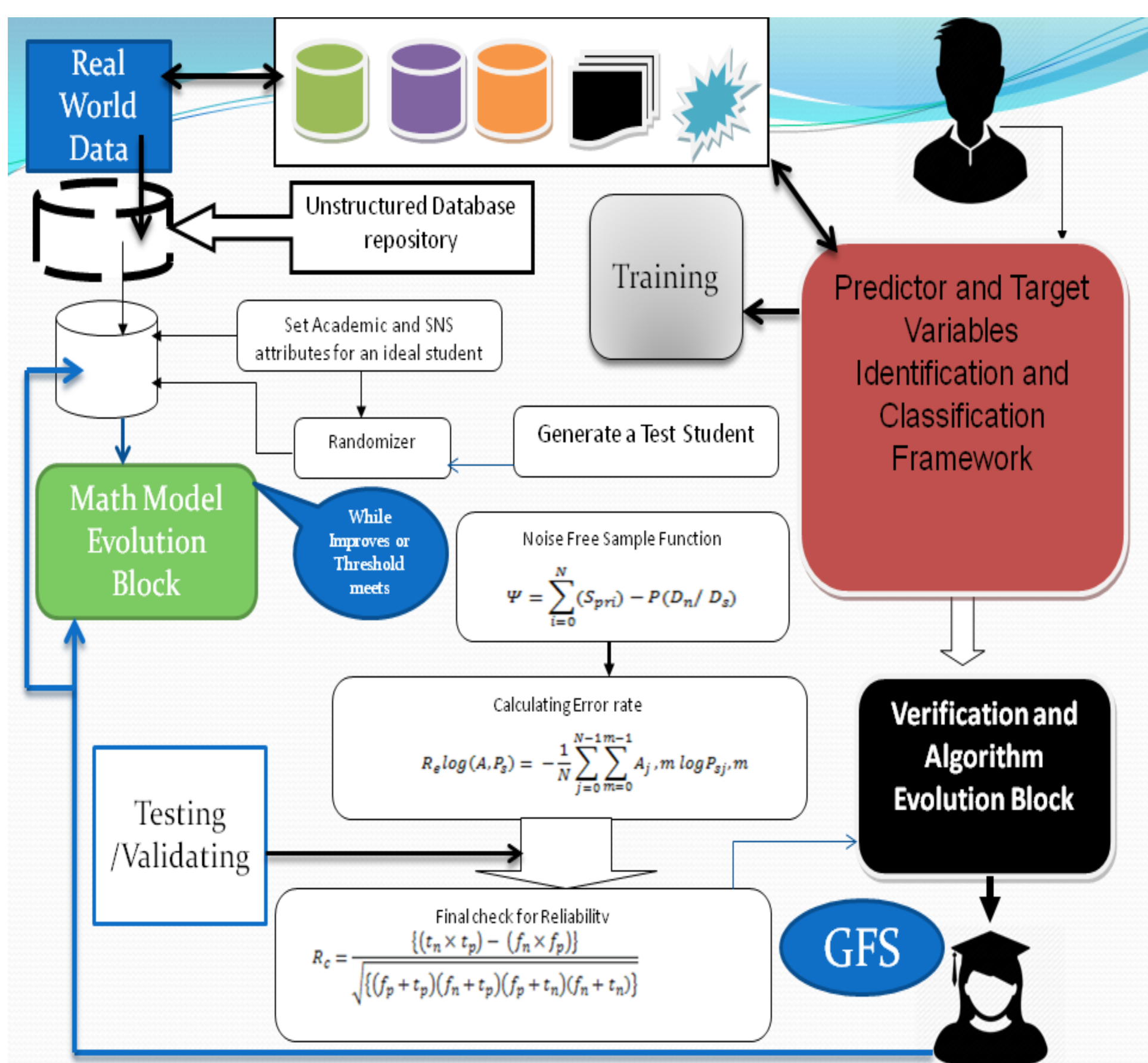

METHODOLOGY

This work utilizes blend of techniques including Linear Regression, Multiple Regression, Logistic Regression, Supervised and Unsupervised Machine learning, Stochastic Probability Distribution, Classification rules, and Bayesian networks.

This work uniquely develops a math model step by step by training and testing data to write the algorithms (GFS and GFC) and then model keeps improving (learning) in the machine learning process.

Data warehouse is created in Microsoft SQL Server and Azure Machine Learning platforms.

Results and data are processed in Microsoft Excel Data mining tools, Python Data, Math and Science Libraries and R machine learning, to produce results showing improved predictions, accuracy and target variables quantification.

PRILIMINARY RESULTS

Linear Regression showing high correlation between FF and FF_PAE

Performance of Good Fit Candidate
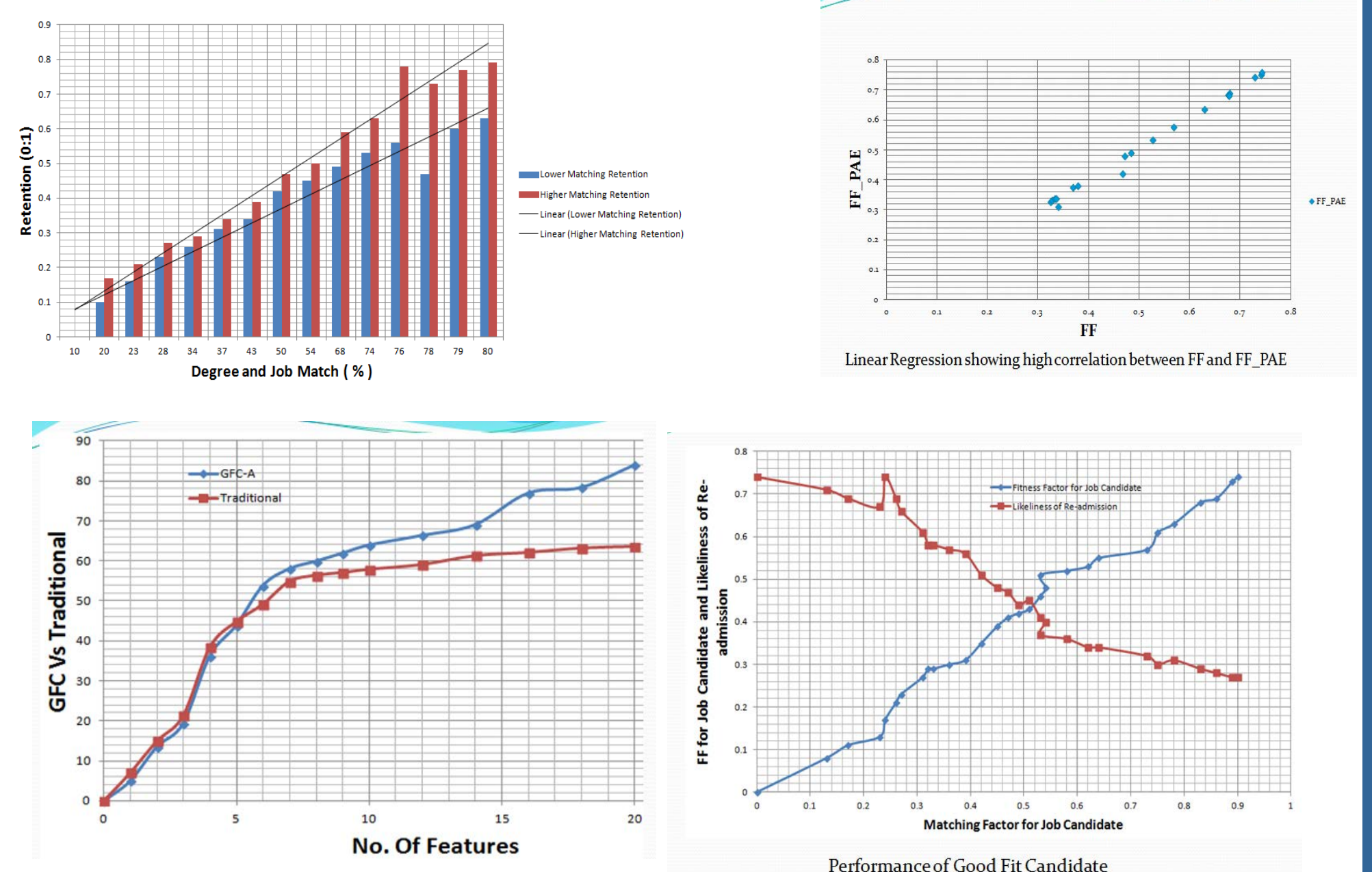
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