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**Research Proposal**

1. **Introduction**

There are several factors that motivate employees at the workplace to be more productive and incentivized to perform above and beyond. In the same vain, there may be other factors that demotivate employees. This research focuses on observing several relationships between attrition at the workplace and other factors such as age, gender, education level, salary and so on. The purpose of this is to use data and statistical knowledge to explore these trends which may not always be conspicuous in order to help managers and employers better address these issues.

1. **Data Preparation**

The data was obtained from “<https://www.kaggle.com/pavansubhasht/ibm-hr-analytics-attrition-dataset>” . The dataset was created by IBM and records various employees’ information such as background, workplace disposition and job attrition. It contains 35 attributes and 1470 instances. It contains zero null values. Of the columns, 25 are numeric and 10 are object types. I intend to do basic exploratory data analysis, statistics and visualizations for example constructing a cross plot, histograms to test which numeric columns conform to a normal distribution and which ones are non- parametric. I also intend to apply statistical measures such as the t-test and confidence intervals on the features of interest to provide meaningful conclusions on the how attrition at the workplace relates to other factors.

1. **Hypothesis and Expected Outcomes**

Main hypothesis: Are married people more likely to be satisfied with their jobs compared to single people.

Other questions to explore include comparing different job types, monthly rate, overtime, gender, wages, education to attrition among the employees. The significance is to better inform hiring managers how they can motivate employees to enhance productivity.

1. **Conclusion**

With the ever-growing competition levels among companies, it is rather imperative that the workforce is not only skilled, but also that all parameters that engender attrition are mitigated. This ultimately could improve productivity and reduce downtime. That was my inspiration to work with this dataset and I am curious about the discoveries I will be able to make.