Improving Candidate Selection using a Combination Model: A Special Operations Aviation US Army Case Study

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Abstract: Selection processes assess which candidates are most likely to succeed within a particular field. Measures for selection are based on the needs of an organization. Selection processes have been studied in cases ranging from soccer to the military. Organizations are always looking for new talent to improve their workforce, but the most successful ones conduct selection processes to determine which potential candidates will succeed. Organizations prioritize different factors based on measures they value within candidates, their current needs, and their future needs. This process begins with recruiting. Once applicants indicate interest in applying, they usually fill out an application that the program uses to determine whether said applicant will be granted the opportunity for further assessment. These screening processes need to be thoroughly designed to ensure that unqualified candidates do not make it through, while at the same time ensuring that qualified candidates that would be successful are not turned away. An effective and robust selection process will strengthen the success and longevity of an organization. This will bring talent to their workforce and reduce the amount of money associated with firing unqualified employees and retraining existing ones. A good recruitment and selection process can separate a good company from a great one. (Rhine et al., 2023).

Several studies have attempted to address these problems in selection processes through modeling. However, most had very low accuracy rates (Beal, 2010; Zazanis & Lappin, 1998). Literature calls for improvements in all parts of the selection process (Rhine et al., 2023). In this paper, we choose to focus on the initial screening process to improve the selection of candidates for assessment. We propose a combination model which utilizes expectation, logistic regression, and optimization. We apply our model to a case study of the 160th Special Operations Aviation Regiment (SOAR), the preeminent aviation unit in the US Army. The 160th must decide which soldiers to bring through Green Platoon, a six-week assessment process, determining who joins the regiment. Previously, the 160th had not selected soldiers well, leading to high attrition rates & wasted funds. We built a model which selects a robust candidate pool that improves graduation rates & reduces wasted funds by $323,459 annually.

1. References

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