

Prioritization assessment for Software development

BACKGROUND: Software development projects typically encompass six fundamental phases: Requirements, design, implementation (and integration), testing (validation), deployment (installation), and maintenance. In the initial stages, general requirements are gathered, and the scope of the functionality is defined. Subsequently, alternative scenarios for the required functionality are developed and assessed. The implementation phase, often consuming 50% or more of the development timeline, involves translating the design into code and integrating it with other software components. During the concluding phases, the software undergoes testing, is put into use, and any defects or performance issues are addressed.

ApDudes, a developer of applications for tablet computers, faced challenges meeting project deadlines. Only 10% of their projects were completed within budget and on schedule the previous year, negatively impacting their business. The group's project manager was tasked with investigating issues within the implementation phase. He discovered that software engineers were struggling to prioritize their work and frequently became overwhelmed by the complexity of the projects.

Consequently, two changes were implemented. Each project was divided into smaller, discrete tasks or jobs, and each job was assigned a priority. The project manager believed that this classification and prioritization system would expedite the completion of high-priority jobs, thereby reducing the overall project completion time.

BUSINESS PROBLEM: Our primary focus is on the effectiveness of the prioritization system. If the system is functioning as intended, high-priority jobs, on average, should be completed more rapidly than medium-priority jobs, and medium-priority jobs should be completed more quickly than low-priority jobs. We will utilize the available data to determine whether this hypothesis is supported.

DATA AVAILABLE:

Priority_Assessment.csv

The dataset comprises a random sample of 642 jobs completed over the past six months. The variables in the dataset include:

Days: The number of days taken to complete the job.

Priority: The priority level assigned to each job.