

ABSTRACT

PRODUCTION COMPLETION TIME PREDICTION FOR K-OSKU CONVECTION MSME USING THE DECISION TREE ALGORITHM

By:

M. ADAM REYNALDY

E-mail: adamreynaldy2000@gmail.com

K-OSKU is a micro, small, and medium enterprise (MSME) in the apparel manufacturing sector, specializing in custom and ready-made T-shirt production. The company produces high-quality blank T-shirts in various sizes and colors, serving personal, community, and business needs. A primary service is T-shirt personalization using Direct-to-Film (DTF) printing, a contemporary technique that yields vibrant, detailed, and durable fabric designs. With a team of four employees, K-OSKU prioritizes quality, customer satisfaction, and operational flexibility. The enterprise fulfills orders ranging from single customized pieces to large batches, serving both individuals and organizations. Beyond blank T-shirts and DTF printing, K-OSKU has diversified its product offerings to address broader market demands. To address key operational needs, particularly accurate production completion time forecasting, which is vital for workflow planning and efficiency, this study focused on applying the Decision Tree algorithm. By introducing a data-driven approach to predict completion times, the research aims to directly support better time management and operational decision-making in K-OSKU's production process.

Keywords: Prediction, Garment Production, MSME, Decision Tree Algorithm

