Productivity Prediction of Garment Employees Data Set

Download: Data Folder, Data Set Description

Abstract: This dataset includes important attributes of the garment manufacturing process and the productivity of the employees which had been collected manually and also been validated by the industry experts.

Data Set Characteristics:	Multivariate, Time-Series	**Number of Instances:**	1197	**Area:**	Business
Attribute Characteristics:	Integer, Real	**Number of Attributes:**	15	**Date Donated**	2020-08-03
Associated Tasks:	Classification, Regression	**Missing Values?**	Yes	**Number of Web Hits:**	19867

Source:

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Data Set Information:

The Garment Industry is one of the key examples of the industrial globalization of this modern era. It is a highly labour-intensive industry with lots of manual processes. Satisfying the huge global demand for garment products is mostly dependent on the production and delivery performance of the employees in the garment manufacturing companies. So, it is highly desirable among the decision makers in the garments industry to track, analyse and predict the productivity performance of the working teams in their factories. This dataset can be used for regression purpose by predicting the productivity range (0-1) or for classification purpose by transforming the productivity range (0-1) into different classes.

Attribute Information:

01 date : Date in MM-DD-YYYY
02 day : Day of the Week
03 quarter : A portion of the month. A month was divided into four quarters
04 department : Associated department with the instance
05 team_no : Associated team number with the instance
06 no_of_workers : Number of workers in each team
07 no_of_style_change : Number of changes in the style of a particular product
08 targeted_productivity : Targeted productivity set by the Authority for each team for each day.
09 smv : Standard Minute Value, it is the allocated time for a task
10 wip : Work in progress. Includes the number of unfinished items for products
11 over_time : Represents the amount of overtime by each team in minutes
12 incentive : Represents the amount of financial incentive (in BDT) that enables or motivates a particular course of action.
13 idle_time : The amount of time when the production was interrupted due to several reasons
14 idle_men : The number of workers who were idle due to production interruption
15 actual_productivity : The actual % of productivity that was delivered by the workers. It ranges from 0-1.

Relevant Papers:

[1] Imran, A. A., Amin, M. N., Islam Rifat, M. R., & Mehreen, S. (2019). Deep Neural Network Approach for Predicting the Productivity of Garment Employees. 2019 6th International Conference on Control, Decision and Information Technologies (CoDIT). [Web Link]

[2] Rahim, M. S., Imran, A. A., & Ahmed, T. (2021). Mining the Productivity Data of Garment Industry. International Journal of Business Intelligence and Data Mining, 1(1), 1. [Web Link]

Citation Request:

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