

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Sudan University of Science and Technology

College of Graduated Studies



## Clustering Technique

## For Analyzing Garment Sizing Systems

تقنيات العنقدة لتحليل أنظمة قياسات الملابس

A dissertation submitted for Partial Fulfillment for the requirements of the degree of  
M.Sc. in computer science

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# **Dedication**

**Dedication to my mother...**

**Whit warmth and faith...**

**Dedication to my father...**

**Whit love and respect ...**

**Dedication to my sisters and brothers...**

**Who support me...**

**Dedication to my friends...**

**Whom we cherish their friendship**

**Dedication to my special people**

**Who mean so much to me...**

**Dedication to all my teachers ...**

**I n whom I believe so much ...**

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research.**



# Abstract

In garment production engineering, sizing system plays an important role for manufacturing of clothing. The standards for defining the size status are a critical issue. Locating the right garment size for a customer depends on the label as an interface.

The intend in of this research is to use data mining technique (clustering) to access the suitability of the standard sizing system to Sudanese (men shirt & men trousers).

The data set used in the research was collected for the men's age ranges between 25 and 66 years.

This research is comparing international standard sizing system (XS, S, M, L, XL, 2XL, 3XL), with our data set. There are 3 experiments have been performed to find the distribution of Sudanese (male) sizes.

The results show that: The size 3XL does almost not exist among the data and the majority of Sudanese are in the S sizes (36% for shirt) and L sizes (43% for trouser).

## المستخلص

في هندسة انتاج الملابس يلعب قياس المقاسات دور هام في صناعة الملابس ،المعايير لتحديد المقاس هي مسألة حاسمة،تحديد المقاس الصحيح لعميل يعتمد على التسمية والحجم.

الهدف من هذا البحث استخدام تقنية التنقيب عن البيانات (التجميع) للوصول الى نظام قياس قياسي للرجال السودانيين (قميص رجال وبنطلون رجال).

البيانات المستخدمة في البحث تم جمعها عن الفئات العمرية للرجال بين 25 و 66 عاما. هذا البحث وجد تجميع القياسات و مقارنتها مع القياسات العالمية.

تمت المقارنة بين المقاسات العالمية (XS, S, M, L, XL, 2XL, 3XL)

و المقاسات المستخدمة في البحث ،كما قمنا بعمل ثلاثة تجارب لايجاد مقاسات السودانيين الموزعة.

النتائج وضحت عدم وجود المقاس 3XI وأغلبية السودانيين كانت مقاساتهم بين

. (Small was 36% and Large was 43%) .