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DQLab x XERATIC

PROJECT MACHINE LEARNING FOR RETAIL WITH R: PRODUCT PACKAGING

"new bundling package"

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Pada proyek portofolio individual kali ini diminta untuk melakukan analisa terhadap data hasil obervasi beberapa pohon cherry dengan menggunakan bahasa pemrograman R.

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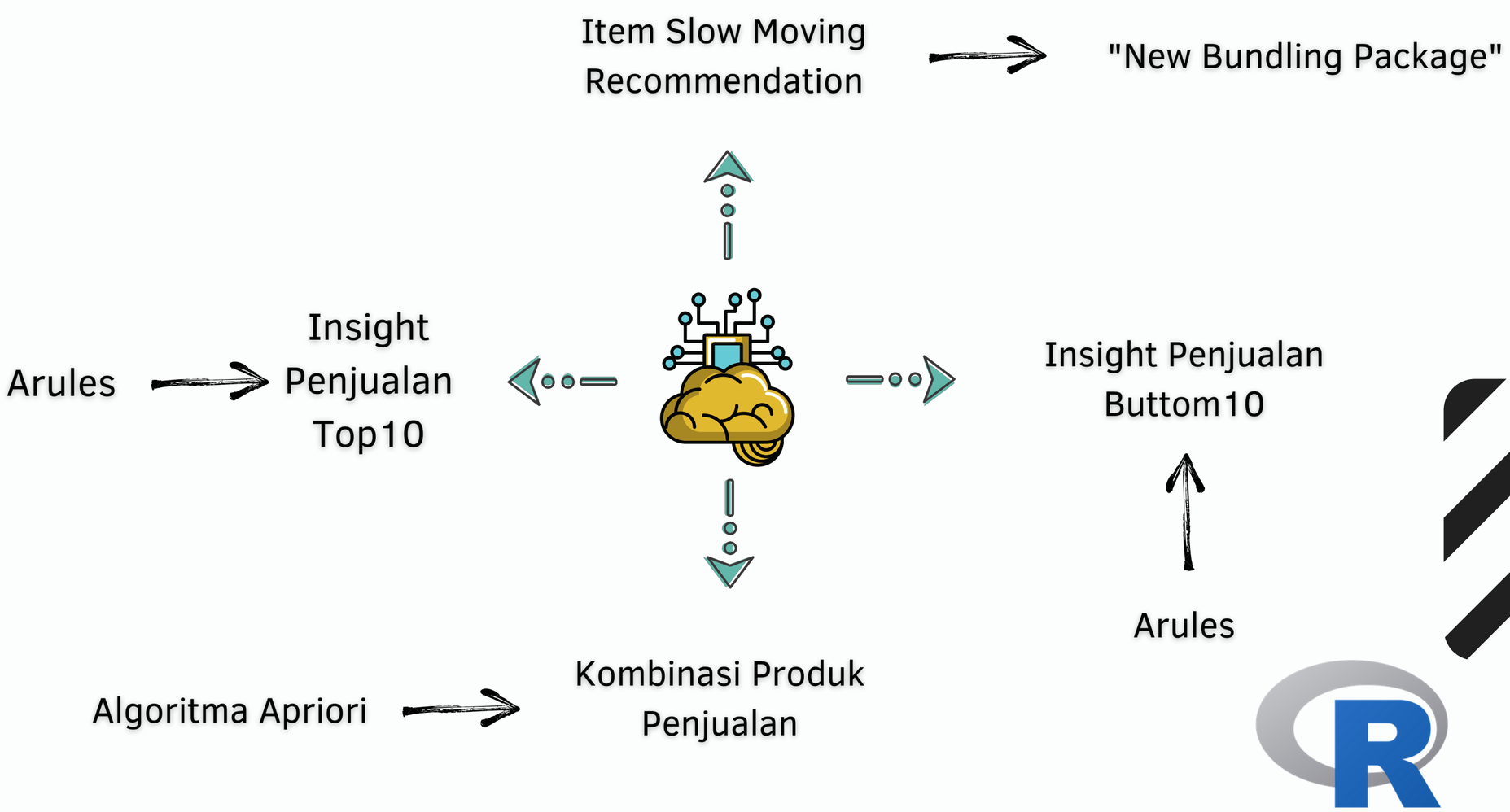
MIND MAPPING



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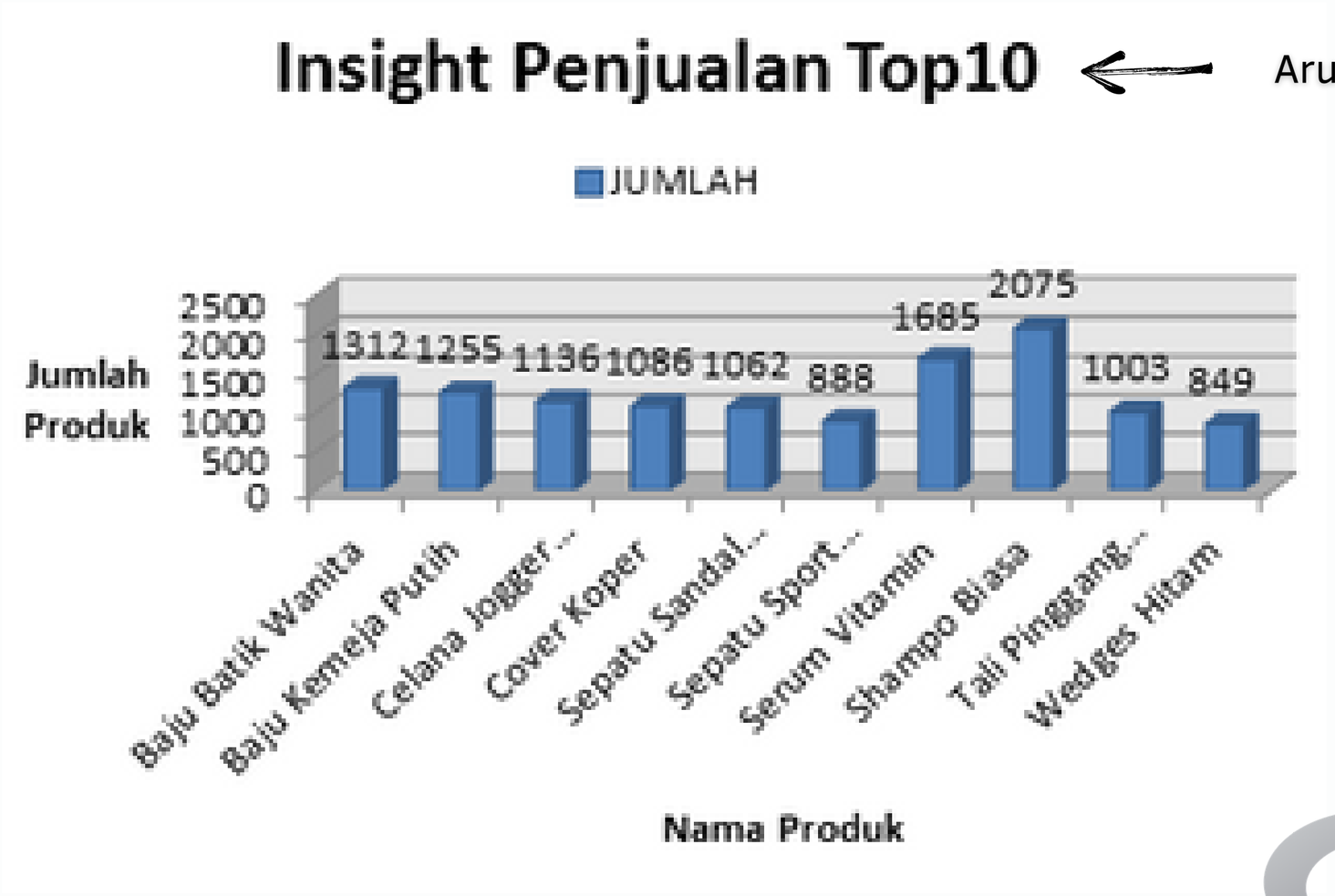

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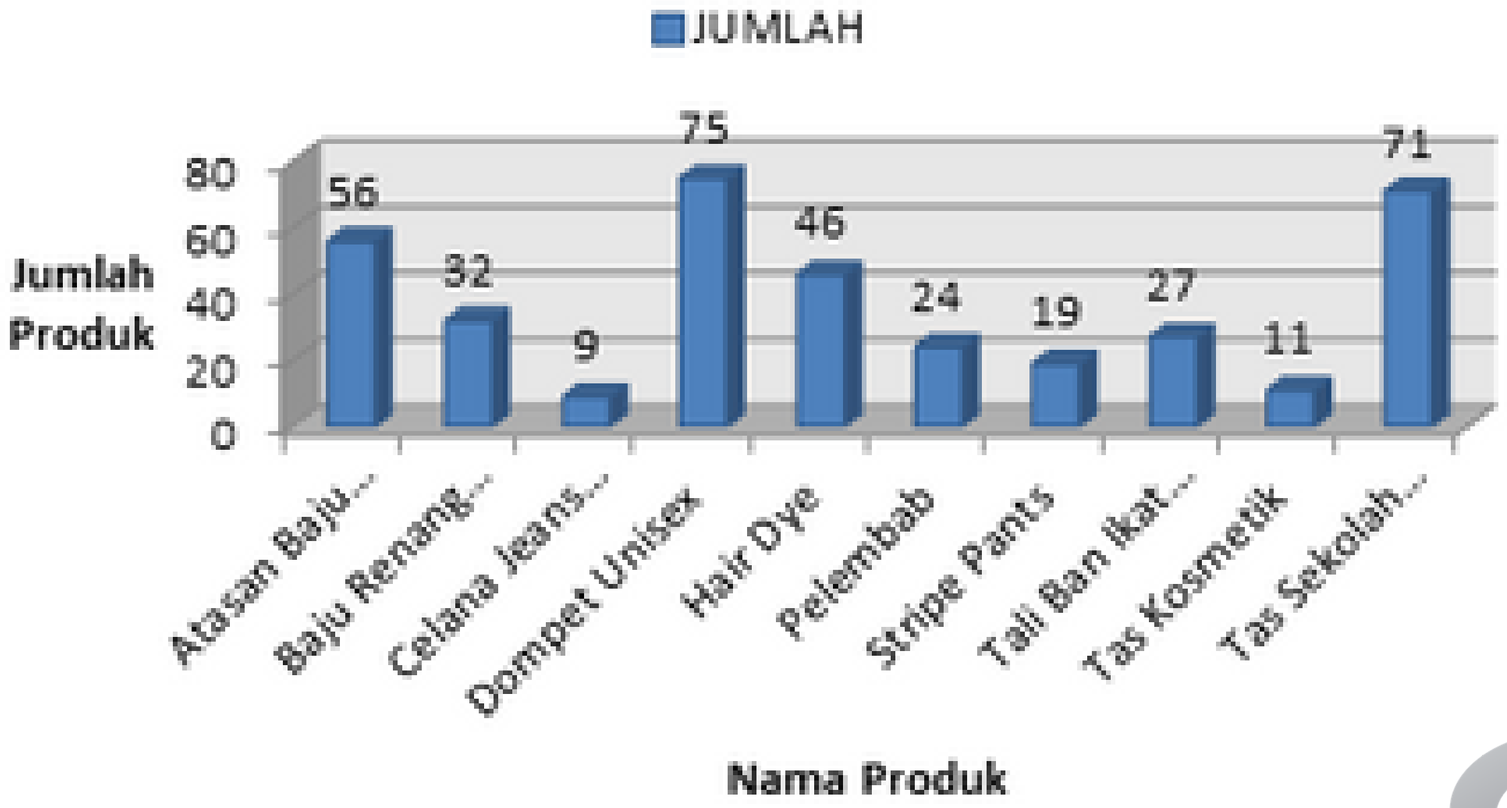
Insight Penjualan Bottom10 ← Arules



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PROJECT MACHINE LEARNING FOR RETAIL WITH R: PRODUCT PACKAGING

Kombinasi Produk Penjualan ← Algoritma Apriori

Tas Makeup + Tas Pinggang Wanita
LHS

Support
0,0104347826086957 → 104
Kombinasi Transaksi

Confidence
0,878048780487805

Lift
24,4295830055075 → >1
Asosiasi tinggi antar item

Baju Renang
Anak Perempuan
RHS

```
library(arules)

transaksi_tabular <- read.transactions(
file="transaksi_dqlab_retail.tsv",
                                       format="single", sep="\t",
                                       cols=c(1,2), skip=1)


rules <- apriori(transaksi_tabular,
                 parameter = list(supp = 10/length(transaksi_tabular),
                                  confidence = 0.5,
                                  minlen= 2, maxlen = 3))

apriori_rules <- c(head(rules, n = 10, by = "lift"))

write(apriori_rules, file="kombinasi_retail.txt")
```

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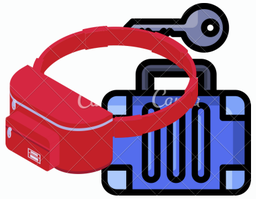
PROJECT MACHINE LEARNING FOR RETAIL WITH R: PRODUCT PACKAGING

Item Slow Moving Recommendation

"New Bundling Package"

Baju Renang Anak Perempuan + Tas Pinggang Wanita



Waist Bag + Gembok Koper

Item Slow Moving

Tas Kosmetik

Baju Renang Anak Laki-laki

```
library(arules)
transaksi_tabular <- read.transactions(file="transaksi_dqlab_retail.tsv", format="single",
sep="\t", cols=c(1,2), skip=1)

rules <- apriori(transaksi_tabular, parameter = list(supp = 10/length(transaksi_tabular),
confidence = 0.1, minlen= 2, maxlen = 3))

apriori_rules1 <- subset(rules, rhs %in% "Tas Makeup")
apriori_rules2 <- subset(rules, rhs %in% "Baju Renang Pria Anak-anak")

apriori_rules1 <- head(sort(apriori_rules1, by = "lift", decreasing = TRUE), n=3L)
apriori_rules2 <- head(sort(apriori_rules2, by = "lift", decreasing = TRUE), n=3L)

apriori_rules <- c(apriori_rules1, apriori_rules2)

inspect(apriori_rules)

write(apriori_rules, file="kombinasi_retail_slow_moving.txt")
```

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PROJECT MACHINE LEARNING FOR RETAIL WITH R: PRODUCT PACKAGING

Rekomendasi Produk Packaging

1. Didapatkan beberapa paket produk yang cocok untuk penjualan terbaru dari hasil analisis penjualan untuk item slow moving yang tersedia, yaitu :
   {Baju Renang Anak Perempuan,Tas Pinggang Wanita} => {Tas Makeup}
   {Baju Renang Anak Perempuan, Tas Ransel Mini} => {Tas Makeup}
   {Baju Renang Anak Perempuan, Celana Pendek Green/Hijau} => {Tas Makeup}
   {Gembok Koper, Tas Waist Bag} => {Baju Renang Pria Anak-anak}
   {Flat Shoes Ballerina, Gembok Koper} => {Baju Renang Pria Anak-anak}
   {Celana Jeans Sobek Wanita,Jeans Jumbo} => {Baju Renang Pria}
2. Rekomendasi produk ini bisa diberikan kepada pelanggan dengan diskon atau harga khusus pada paket produk tersebut, sehingga produk yang termasuk item slow moving bisa habis terjual.