

Markus Ehrenmüller-Jensen



Creating Stunning Datavisualization with R

SAY THANK YOU TO OUR SPONSORS!



Sponsor Raffle!!!

Each sponsor stamp will opt you into their raffle prize and mailings

Collect 9+ sponsor stamps on your Badge to be eligible for the Xbox

Hand entire Badge/ ribbon back into registration desk at end of day

We will draw Badges for prizes at 5pm in Cromwell (if you are drawn and do not have the pre-requisite stamp/s..... You lose!)

Social



Make sure you tweet on #spscambridge or #sqlsatcambridge

During the event we have Giant Jenga, Sack races and Conker Fights!

After event, join us for a post event SharePint/ SQLPint from our bar

Don't forget to thank Sponsors, Volunteers and Speakers!

The event will close at 6.30pm

Introduction

Markus Ehrenmüller-Jensen
Business Intelligence Architect
markus.ehrenmueller@gmail.com



@MEhrenmueller



/markus-ehrenmueller



sqlederhose.wordpress.com



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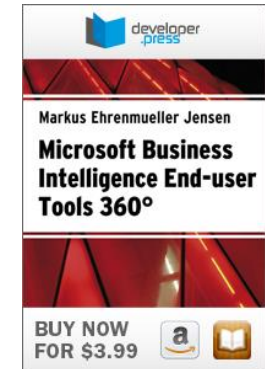
Data Platform

SQL Server 2005 - 2017

BI Developer

Database Developer

Database Admin



pluralsight
hardcore developer training



What this talk is (not) about

YES:

- Data Visualization in general

- Data Visualization especially with R

NOT:

- Introduction to R

- Data Cleansing & Data Preparing



Agenda

From Data to Action
Portfolio/Scatterplot
Barplot
Boxplot
Lineplot

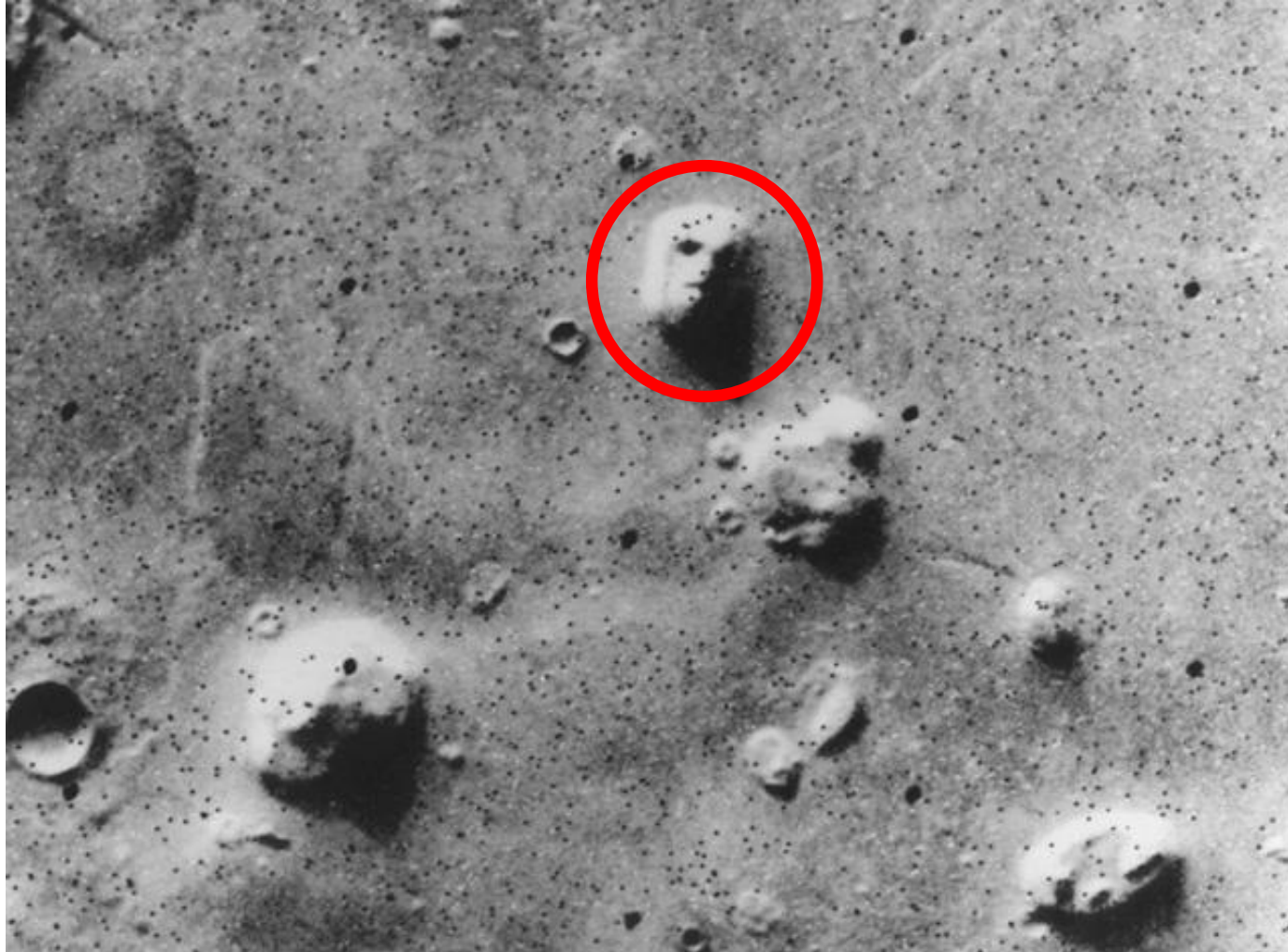


From Data to Action

	Data	1,234,567.89
+	Context	Sales in GBP
+/-	Pertinence	1.2 Mio
<hr/>		
=	Information	
*	Presentation	Line Chart
<hr/>		
=	Insight	Declining Sales
<hr/>		
→	Action	Increase Marketing
<hr/>		



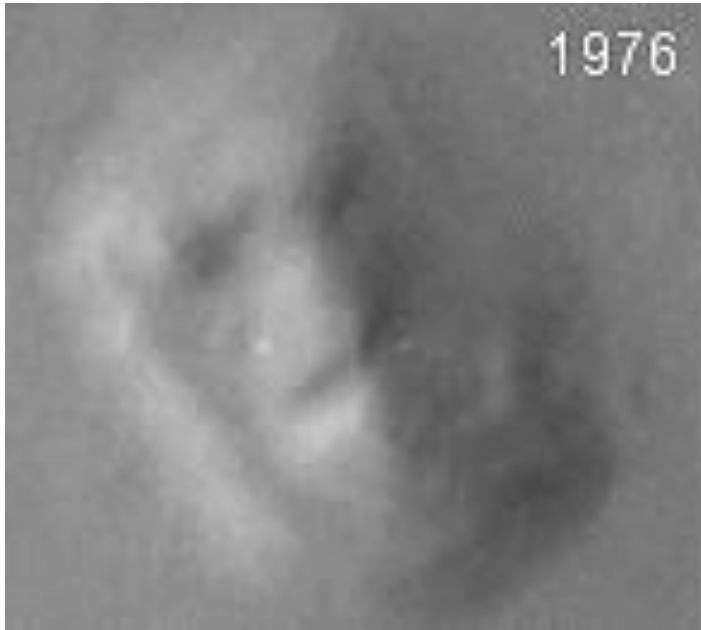
The Face on Mars



Source: <http://www.space.com/17191-face-on-mars.html>



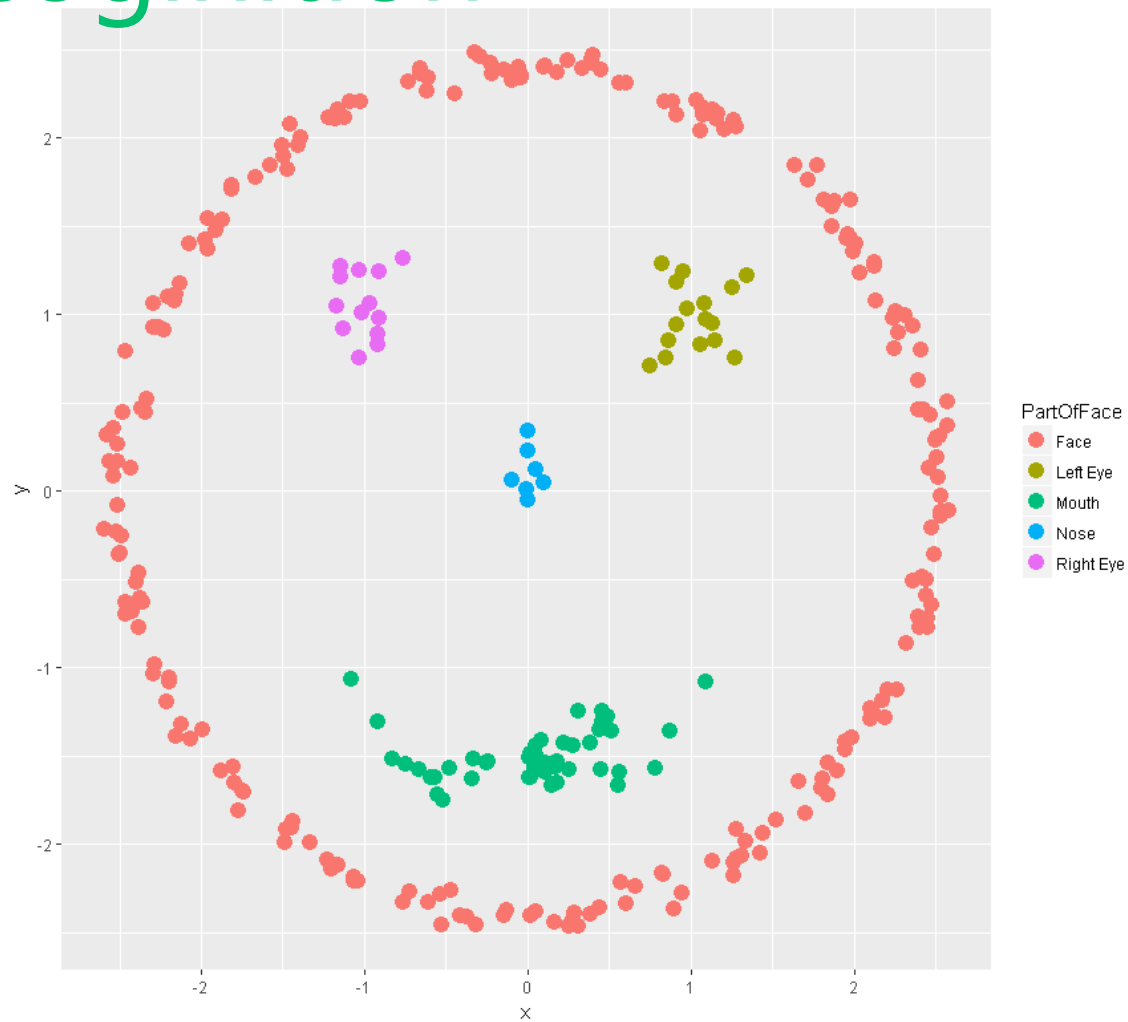
The Face on Mars



Source: <http://www.space.com/17191-face-on-mars.html>



Pattern Recognition



Graphic Packages in R

base

graphics

lattice

ggplot2

...

(available at “The **C**omprehensive **R** **A**rchive **N**etwork”)

https://cran.r-project.org/web/packages/available_packages_by_name.html



ggplot2

Successor of ggplot

Developed by Hadley Wickham

gg = **g**rammar of **g**raphics

Developed by Leland Wilkinson, "The Grammar of Graphics" 1999/2005

Different from other graphical packages and/or R

Build charts via layers



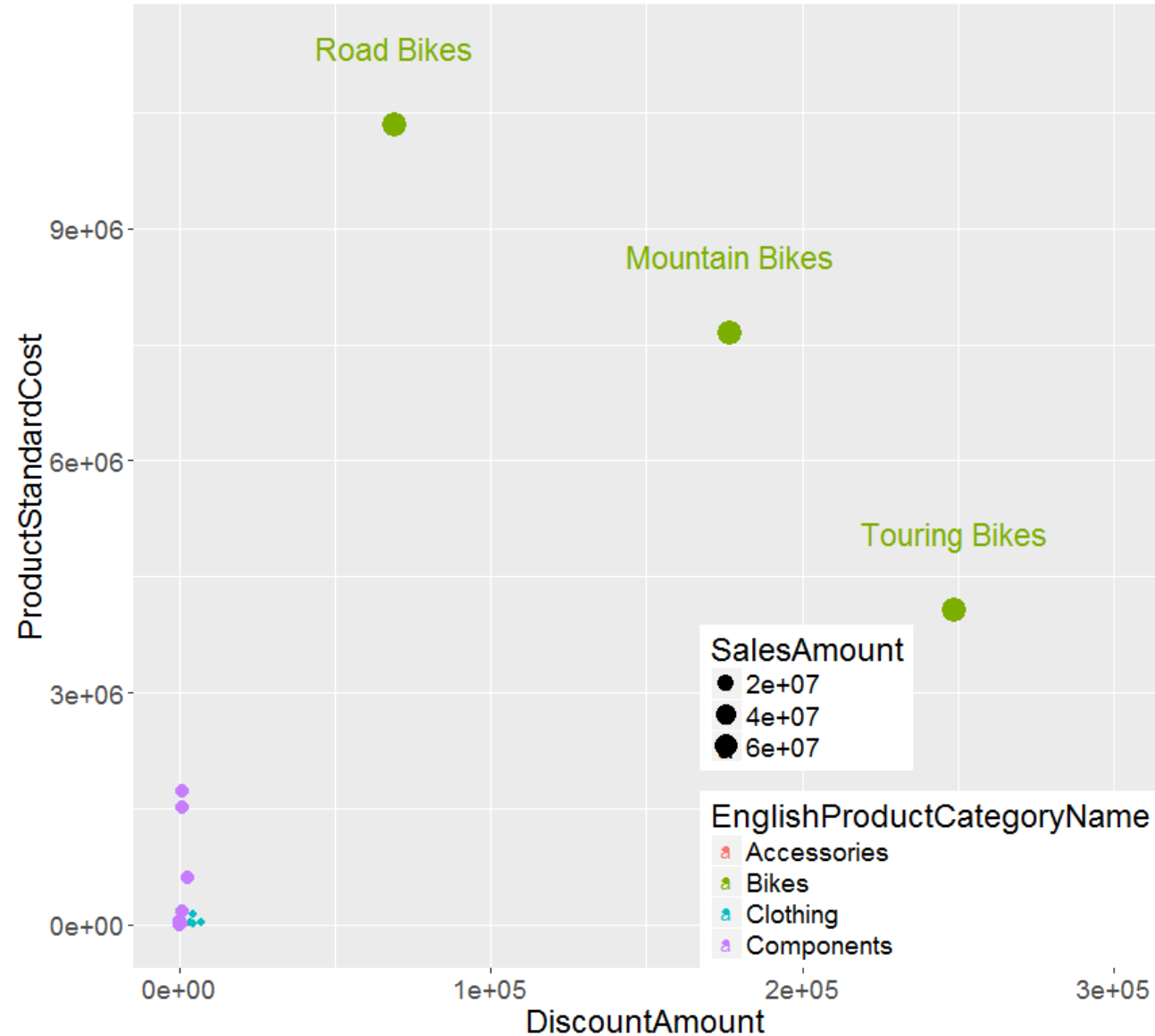
Portfolio/Scatter

Many values

Two or three
measures

simultaneously

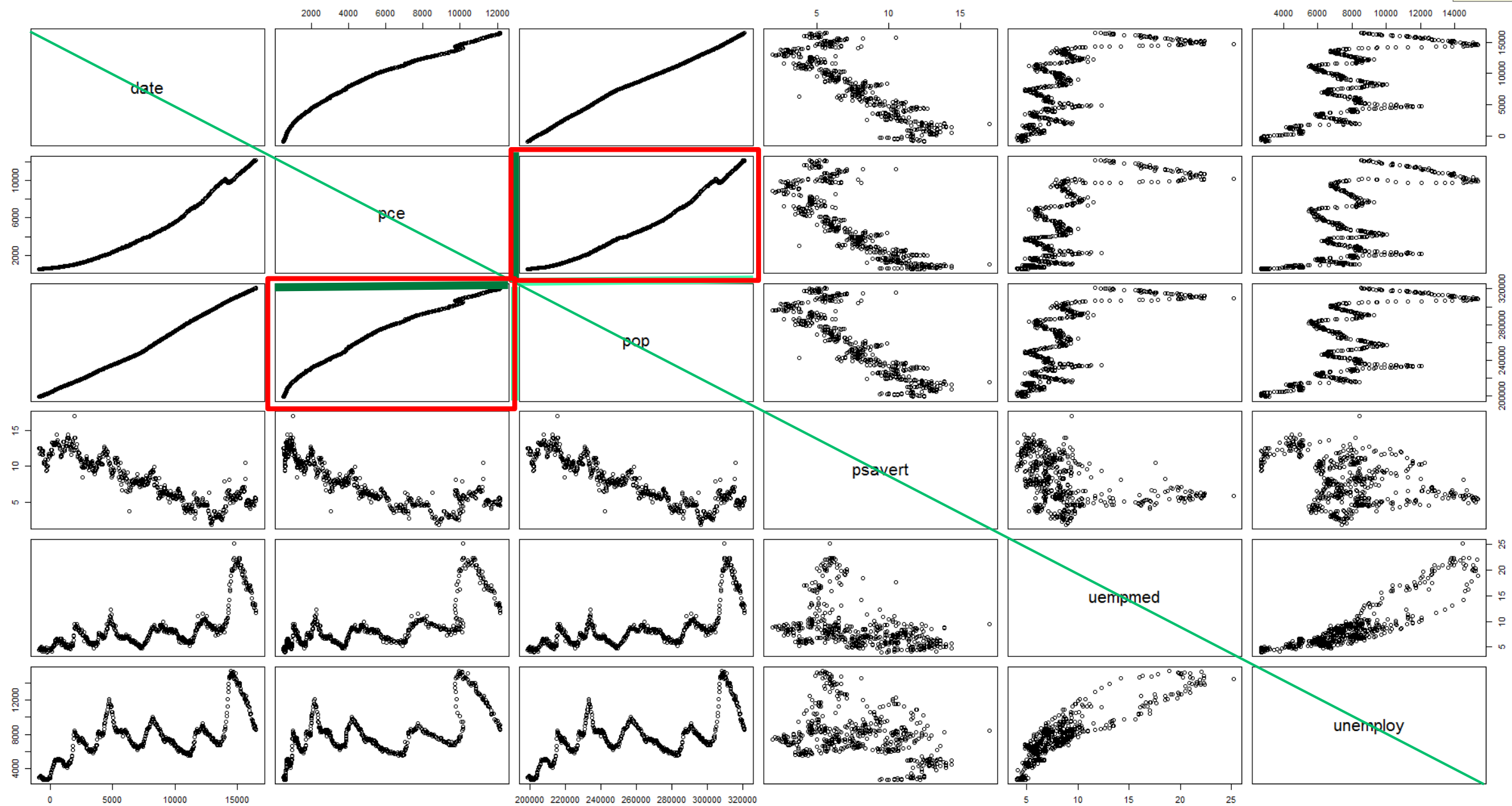
Correlations & Spikes

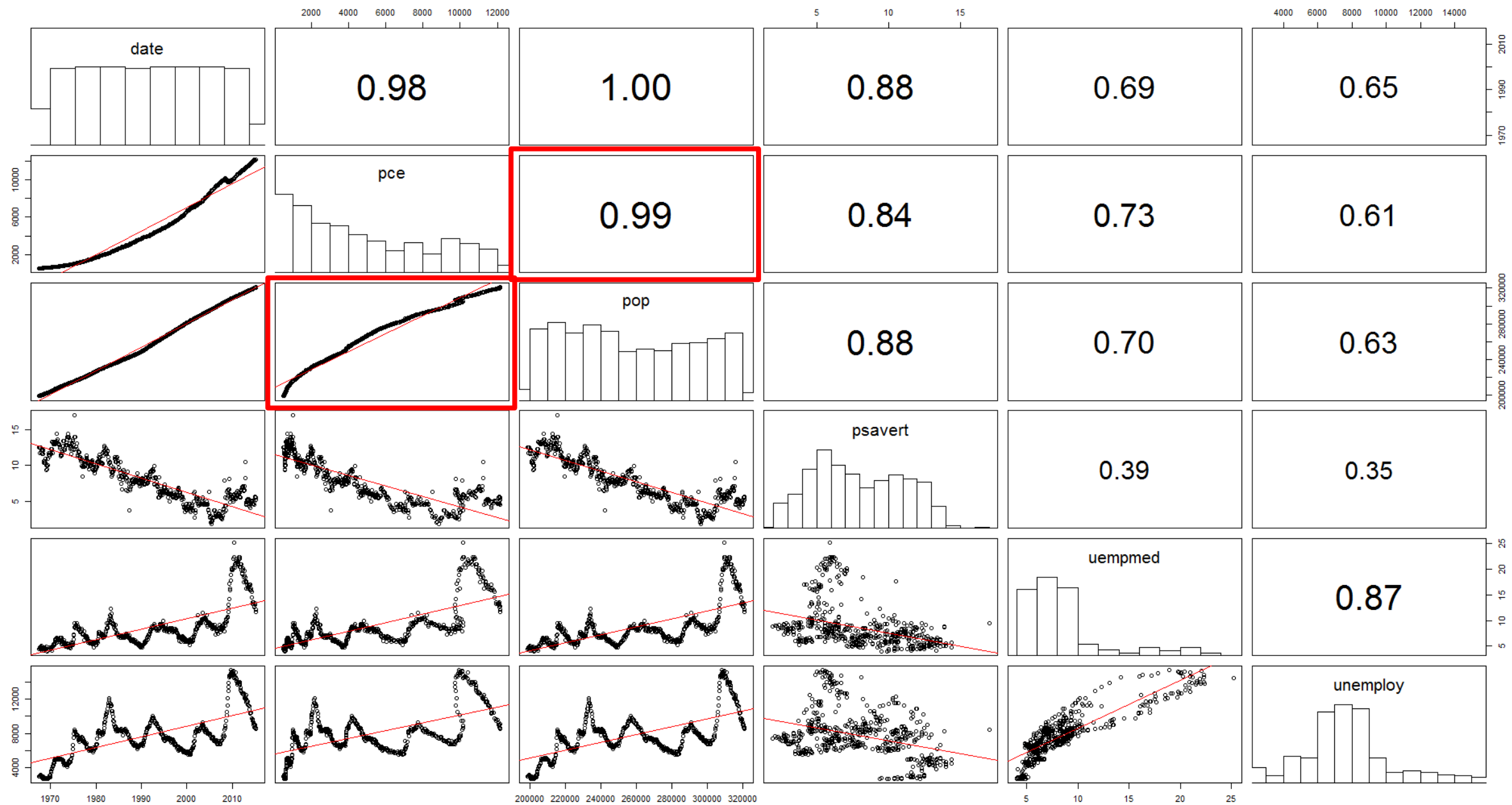


Demo:

Scatterplot







Bar/Column

Compare Values

Ranking

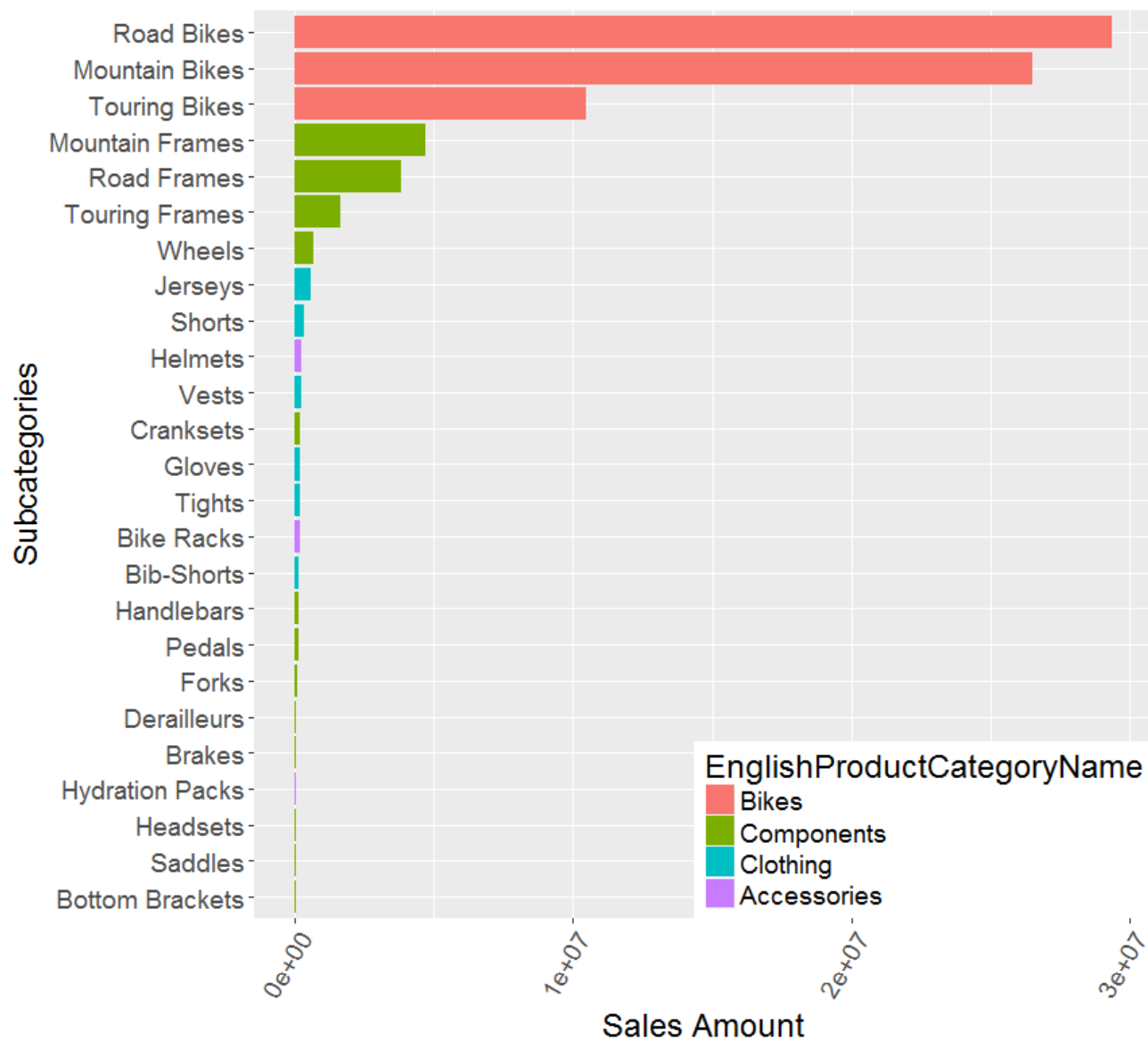
Part of the whole

Bar

Categorical & Histogram

Column

Over Time



Demo: Barplot

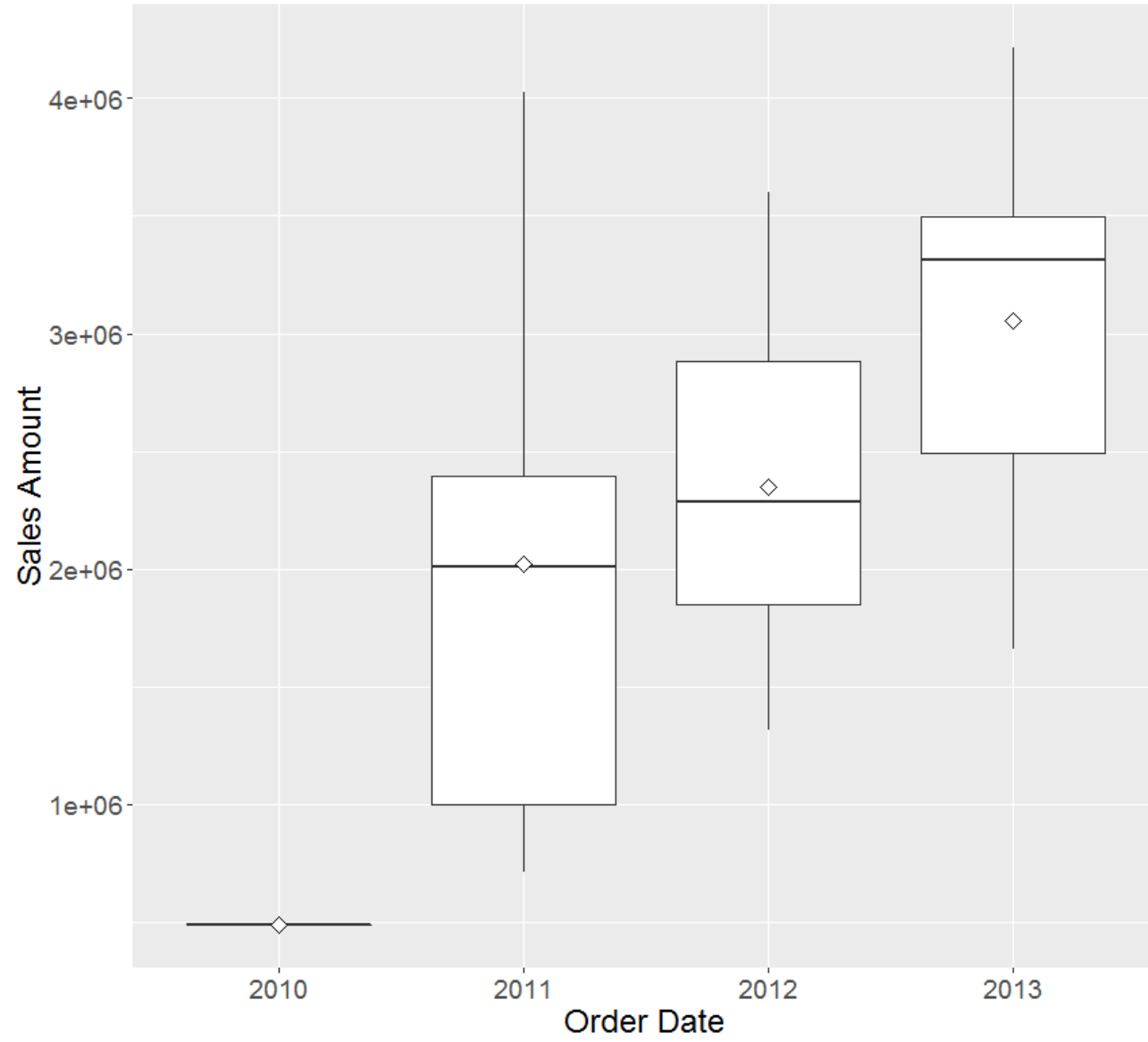


Boxplot

Continuous data

Important for getting a first impression of data

Median, Quartiles, Whiskers & Outliers



EnglishProductCategoryName

Clothing

Median

25th percentile75th percentile

Outlier

1.5x IQR

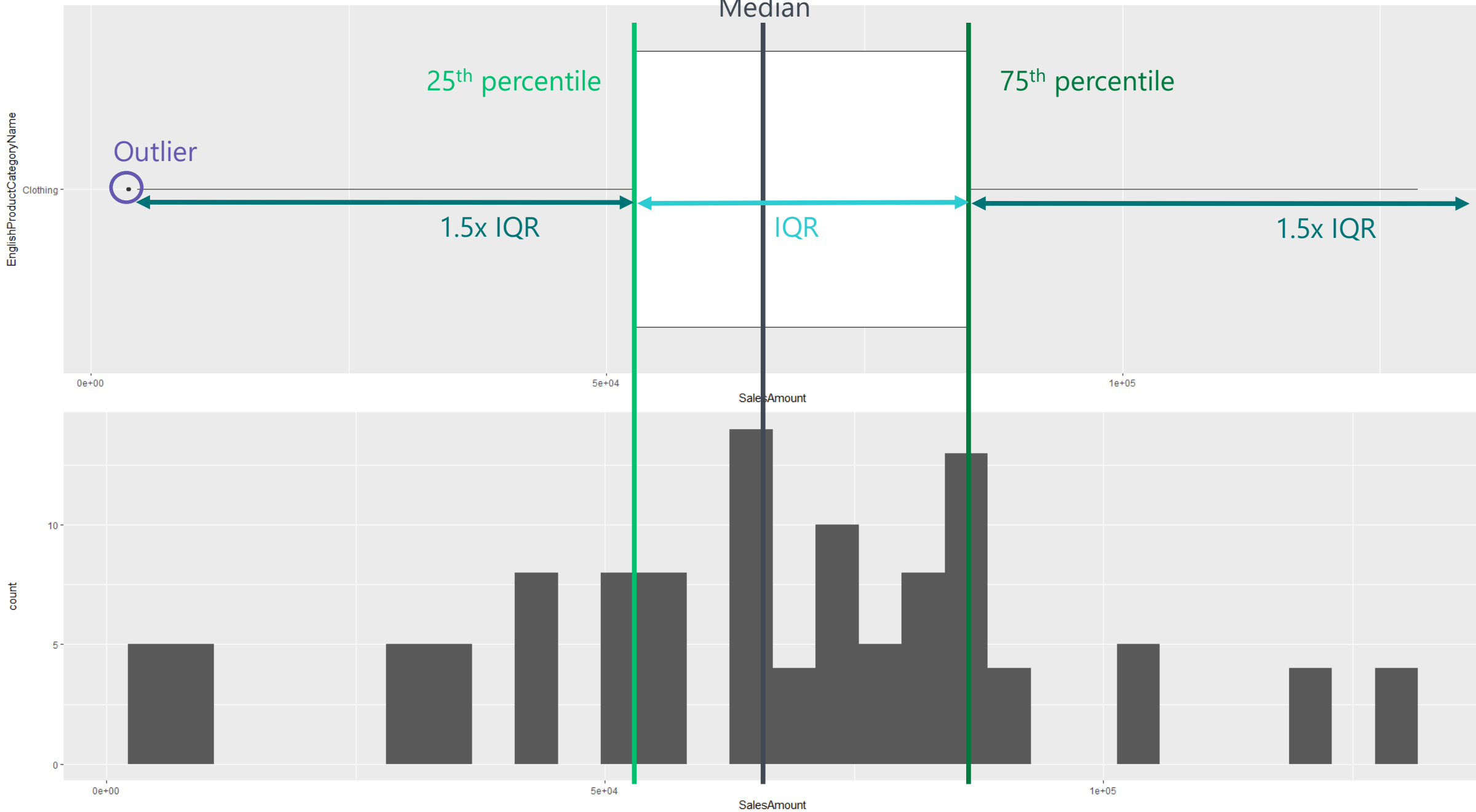
IQR

1.5x IQR

SalesAmount

count

SalesAmount



Demo: Boxplot



Line

Continuous values

Over time

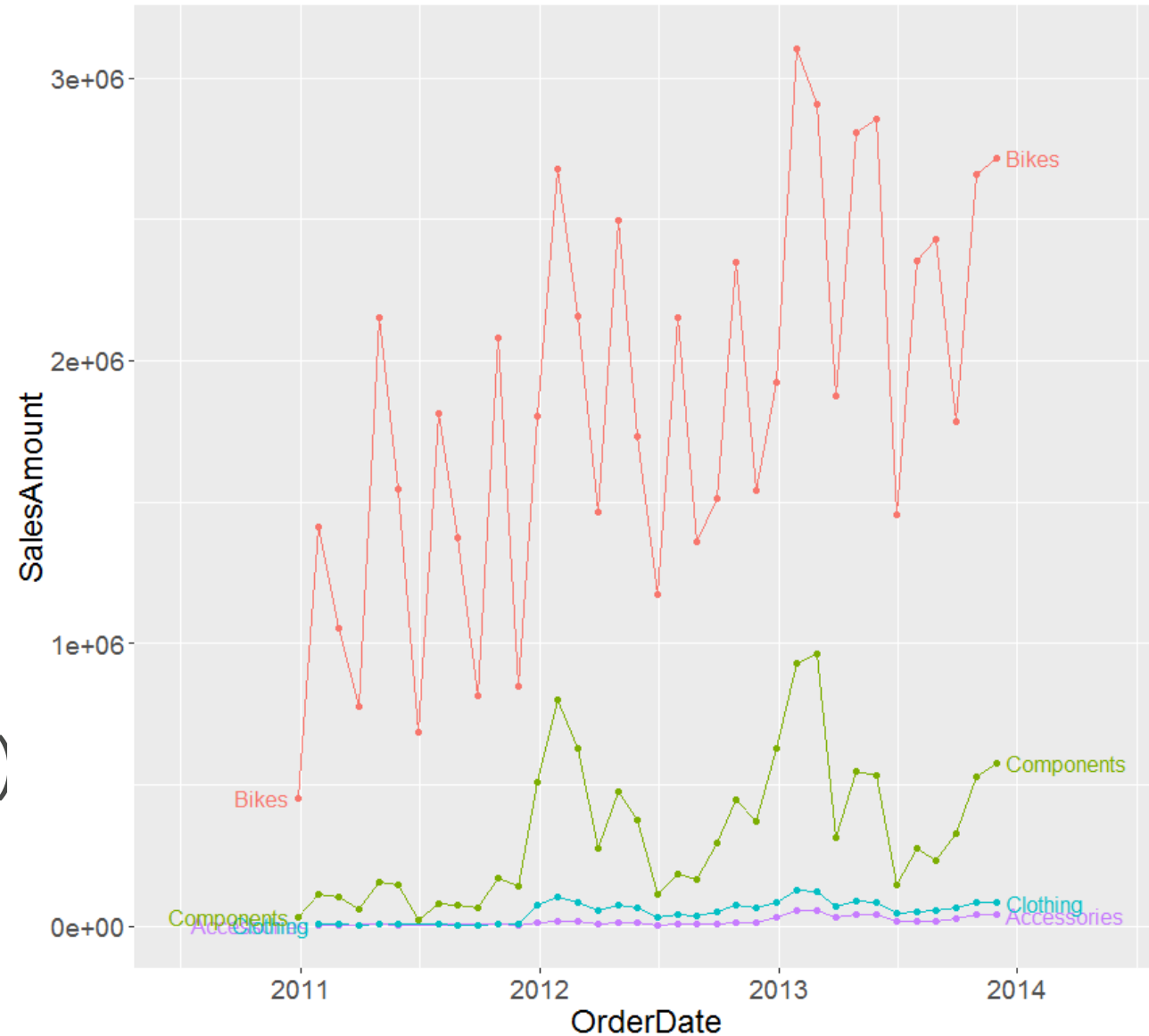
Deviation

Correlation

Do not use for

Nominales (North, East, ...)

Ordinales (1, 2, 3, ...)



Demo: Lineplot



Questions?

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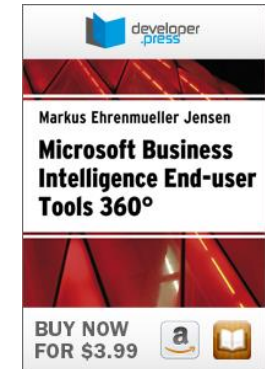
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