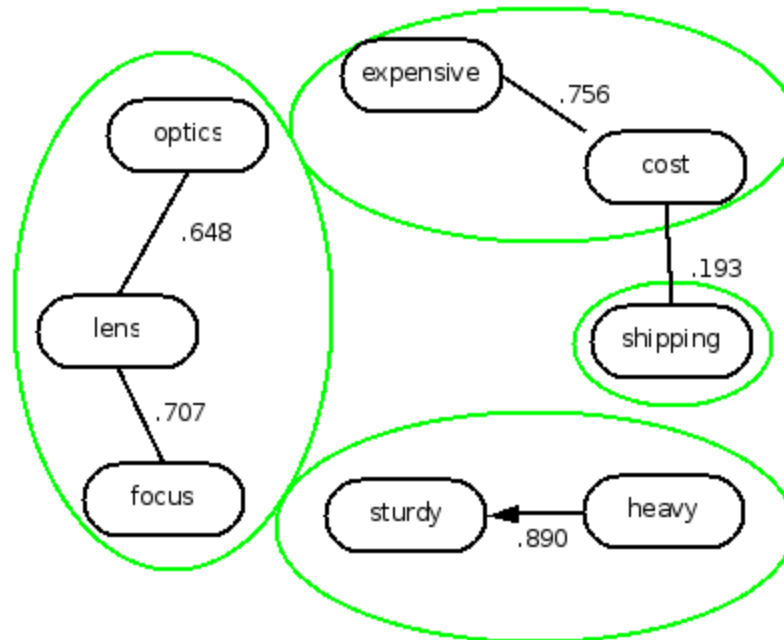
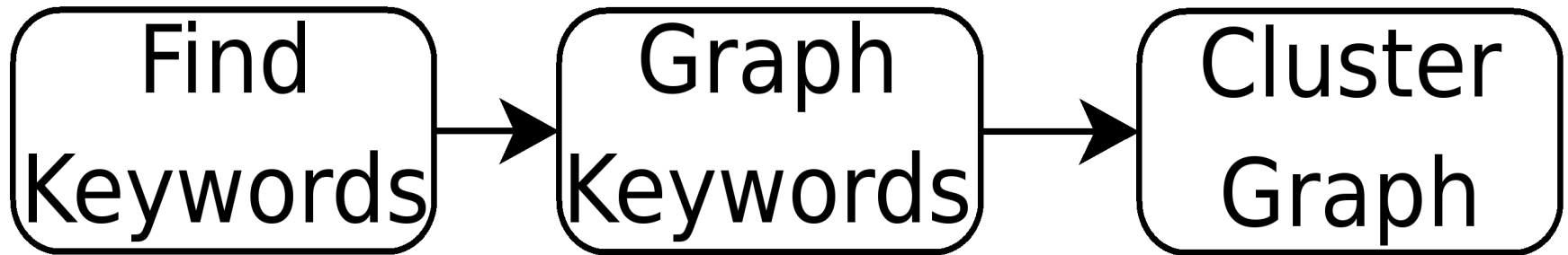


# Extracting Topics from Product Reviews



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# Aldteran Method



# Step 1: Find Keywords

Part A:

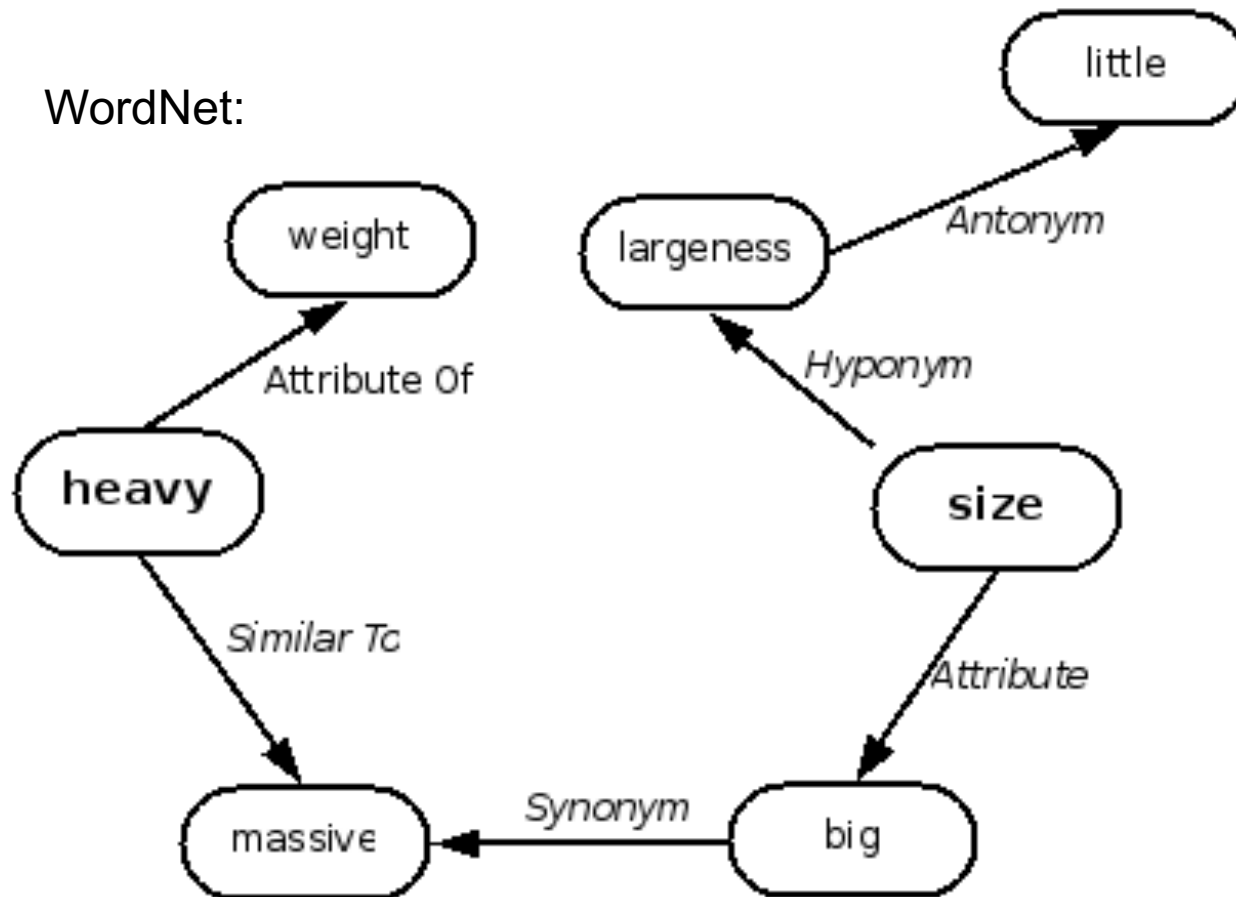
$$\begin{array}{c}
 \text{camera} \\
 \text{lens} \\
 \vdots
 \end{array}
 \begin{array}{c}
 \text{Review \#1} \\
 \text{Review \#2} \\
 \dots
 \end{array}
 \begin{bmatrix}
 5 & 2 & \dots \\
 3 & & \\
 \vdots & & \ddots
 \end{bmatrix}
 \approx
 \begin{bmatrix}
 W
 \end{bmatrix}
 \begin{bmatrix}
 H
 \end{bmatrix}$$

Part B:

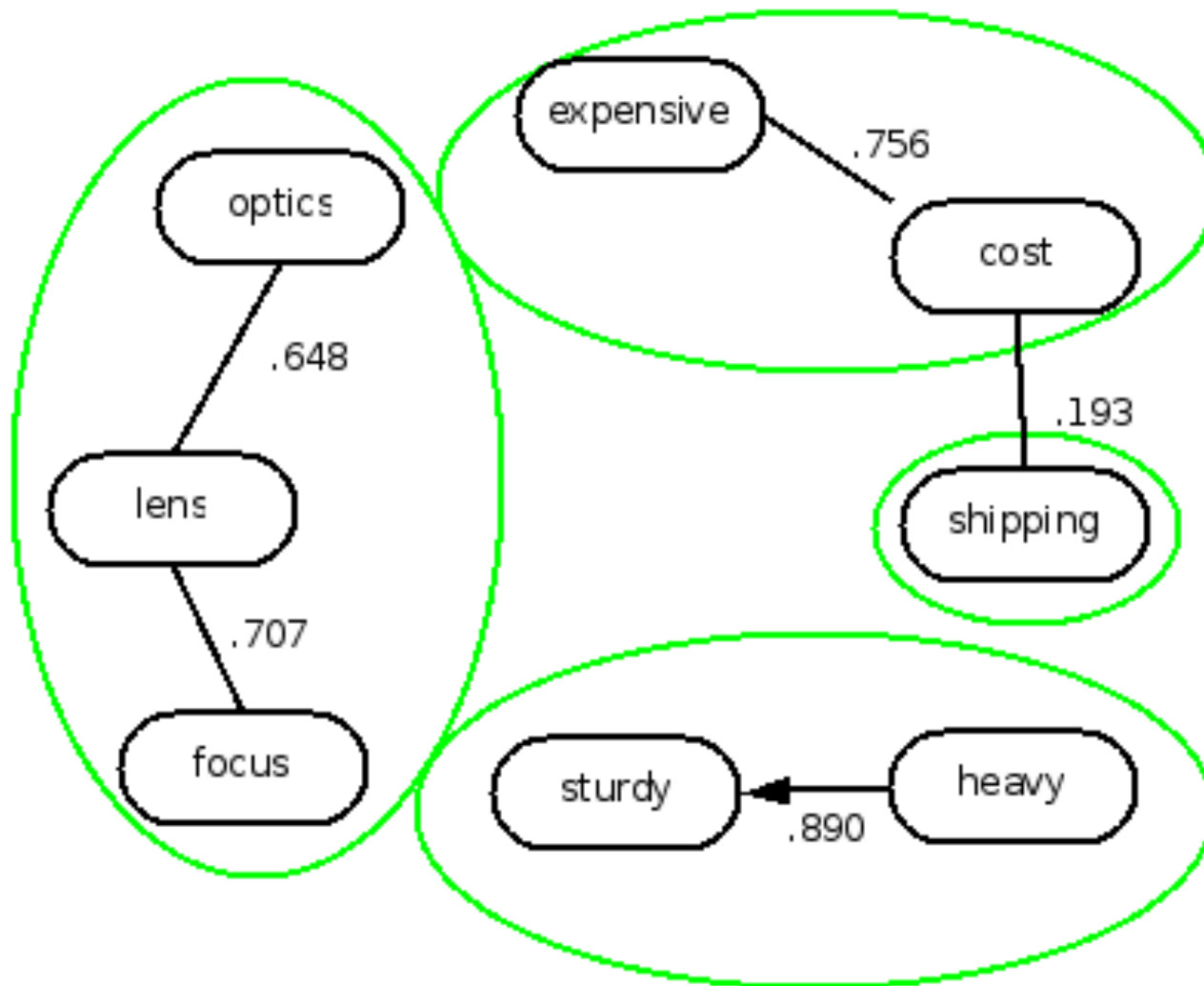
$$\frac{freq_{dataset_i}}{freq_{english_i}}$$

# Step 2: Graph Keywords

WordNet:



# Step 3: Cluster Graph



# Results

## Leica D-Lux 3

image, images, color, quality, clarity  
lens, optics, decent, sturdy  
use, its  
delicate, shipping, raw, mode, ratio  
size, post, noise, flash, screen  
canon, nikon, sony, packaging, mp  
feature, format, shoot, lightweight  
pictures, candid, landscapes  
digital, compact, complicate, swears  
options, menu, item, manual, settings, sensor,  
photos, photographer, worlds, shoots  
camera, cameras  
love, very, great, also, excellent, expensive  
everyday  
grandchildren  
aspect

## Canon PowerShot ProSeries S5

zoom  
lens  
stabilized, blurry  
series, product, digital, canon, mp  
purchase, outstanding  
quality  
reviews, como, muy, bueno, buena  
cap  
pictures, image, optical  
review, shipping, mode  
great, user  
camera, cameras  
photo, awesome, shots  
price, noise  
very, lo, owned, photographs, purchased  
photos, display, videos, controls  
video, recommend, battery  
x, es, por, su  
love, flash  
much, nice, s, excellent