Elementary Statistics for Designers
Personal Reflection

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Preface

At the start of this elective, I was an absolute novice in statistics. I saw the importance of data in design, and prior to starting, I have achieved my *Google Analytics Individual Qualification*[1]. This is a certificate that testifies my competence in the Google web analytics service. Google Analytics is the industry standard for user research on the internet.

So within the context of the websites, I was already knowledgeable on gathering data and acting upon the insights. However, I had no means to apply this knowledge to non-website contexts. Therefore, my main driver for joining this elective was:

> *"To learn how to use statistics to conduct qualitative research within design."*

Key Insights

During this elective, I was taught the elementary theory of statistics. I learnt how to organise values and variables within the quantitative scales of measurement, and gather low-level insights from data by analyzing the central tendency and the dispersion.

On a higher level, I learnt about inferential statistics: the technique of learning from the data beyond its immediate values. I experienced first-hand that inferential statistics is something that requires great precision and careful planning. During some of the assignments, I made assumptions about the data that were not valid at all, leading to incorrect conclusions. In order to prevent this in the future, I will execute research with a higher accuracy, reflecting upon every step taken.

Statistical research can yield evidence that verifies a hypothesis I have created. Within the context of design, I can use statistics to test claims I have made about a product I have designed or assumptions about end-users. This is if, and only if I accurately analyze my variables, place them in the correct scales, and apply appropriate inferential tests.

Future Application

This elective has given me the tools to review data from a critical perspective. I now am better prepared to examine scientific research from a statistical angle. I will be able to apply the research methodology and framework on designing questionnaires from this course in exploratory and validative research phases in the future.

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[1] Google Partners. (2017, August 28). *'Google Analytics Individual Qualification (IQ)'*.
Retrieved on October 28, 2017, from https://www.google.com/partners/#i_
profile;idtf=113823923163774028396