

# Fashionista Phil High Level Design (HLD) Document

## 1. Introduction

Fashionista Phil is devoted to the world of non-hipster fashion and wants to understand color trends within the fashion world. He has hired you and your programmer to build a model that will simulate (not predict) color trends for a ten-year period or longer. He wants to see a nice graph that representing each color's rise or fall. Phil also wants to be able to stop the model at anytime and be able to see a color trending. In this model, you will use people and their colors to analyze trends for Fashionista Phil. People are expressed through their favorite color. Some people will have the same color; some people will have a different one.

## 2. Subject Matter Experts Agreement List

Name	Title/Role	Mandatory Reviewer (Y/N)	Approved
<i>Ojas Patwardhan</i>	Developer	Y	
<i>Phil List</i>	Supervisor	Y	
<i>Amalan Iyengar</i>	Intern-apprentice wrangler	Y	
<i>Mentor</i>	Mentor	Y	

## 3. Requirements

There must be interactions between people. In order for an interaction to happen, two or more people must be next to each other, (diagonally, vertically, or horizontally) for 2 or more timesteps. "Next to", means that a certain number of people are one unit away from each other. When there is an interaction between two or more people, one of three things should happen:

1. Person 1 adopts Person 2's color.
2. Person 2 adopts Person 1's color.
3. Nothing

Hipsters are also a variable you should add to your model. Hipsters have a higher resistance rate, meaning they have a higher chance of not changing colors in an interaction. When the popularity rate of a color goes above ninety percent (over 90% of the people are the same color), the people

should want to change to a new color. It is important you have a counter to measure how many people and are a certain color (blue, red, green, gray, black, etc.).

A [Javascript/Agentsheets] model showing the interactions of agents that exhibit the following behaviors:

- i. A person (different people have random colors, same or different)
  1. Moves around
  2. Interacts with someone for 2 or more timesteps
  3. Will want to change colors more when his color is worn by more than 90% of people
- ii. Hipster (different people have random colors, same or different)
  1. Interacts with people
  2. Is more resistant to changing color

#### **4. Timeline**

This is due within five days of receipt of the task (that would be Friday, June 20 for those receiving this Monday, June 16). It is better to complete this sooner, so that you can begin implementing an HLD that one of your classmates has written.

#### **5. Desired Behavior / Components**

How would you model agent 1 doing behavior 1? Give a step by step explanation of how each agent does each behavior. Think about how you will demonstrate the behavior in the AgentSheets model.

##### **Person**

- a. Moves randomly, one square unit (diagonally, vertically, horizontally) around the area.**
- b. Interact with a person**
- c. Stops during an interaction**
- d. Possibly change colors after the interaction**
- e. Possibly influence another person to change colors during the interaction**
- f. Walk away**
- g. Continue this process**
- h. Accept new colors when his favorite color is liked, or present in more than 90% of the people in his room.**

##### **Hipster**

- a. Moves randomly, one square unit (diagonally, vertically, horizontally) around the area.**
- b. Interact with a person**
- c. Stops during an interaction**
- d. Possibly change colors after the interaction (has a higher resistance rate)**
- e. Possibly influence another person to change colors during the interaction**
- f. Walk away**
- g. Continue this process**
- h. Accept new colors when his favorite color is liked, or present in more than 90% of the people in his room.**

#### **INTERACTIONS:**

- 1. 2 people must be touching**
- 2. They must stop**
- 3. One might change colors but NEVER BOTH**
- 4. The person that changes colors changes to the color of the person it interacted with.**
- 5. During an interaction, sometimes, nothing will happen, and both people will stay the same color**
- 6. After the interaction, both people will continue moving randomly, and get into more interactions**
- 7. (A comment) Have resistant rate and influence rate as variables for people and hipsters. Give hipsters a higher resistance rate**

## **6. Conclusion**

The goal is this activity is to keep Fashionista Phil ahead of the fashion curve. For example, if blue is really popular, then you tell Phil to stop wearing blue. From this model, you can help Fashionista Phil stay up to date on the latest fashion trends so he can become a better fashion fan. You should be able to have a graph showing this. You should be able to present this model to Fashionista Phil answering the following questions:

1. What did you find out?
2. What are the pros and cons of your model?
3. What was challenging?
4. What are you most proud of?