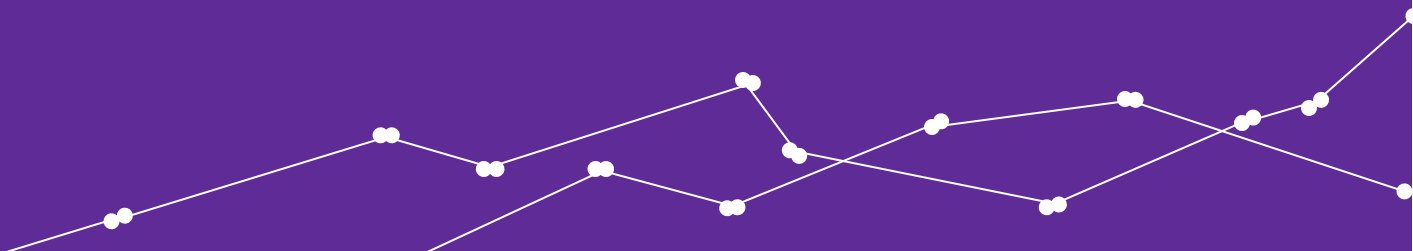


Towards Completion



Idea & Approach

Thesis Questions:

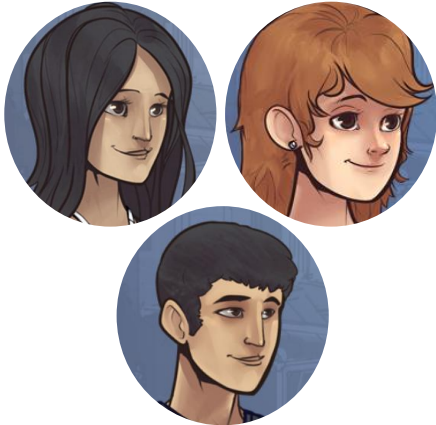
To what extent do playing experiences differ for students with different avatars?
How do we characterize playing experience and categorize students based on it?

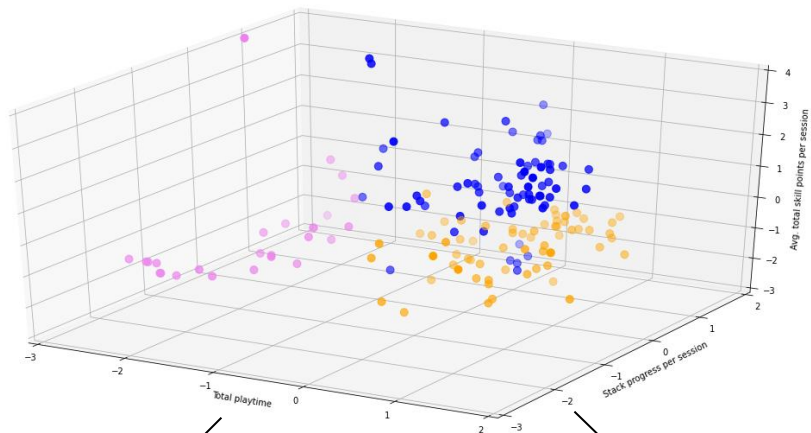
Tools

- **R:** data clean up & factor building
- **Panda:** data combination & manipulation
- **Sklearn:** data clustering & analysis
- **Matplotlib/Plotly:** 3D visualization

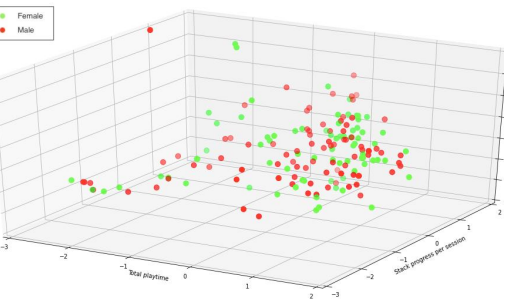
Approach

- Distill to related variables:
 - Avatars types (age, gender, ethnicity)
 - Game experience (stack progress/session, total playtime, average skill points/session)
- Categorize players with K-Means clustering on normalized data
- Examine game experiences among different avatars by:
 - Coloring based on avatar types
 - Performing ANOVA test to compare group means

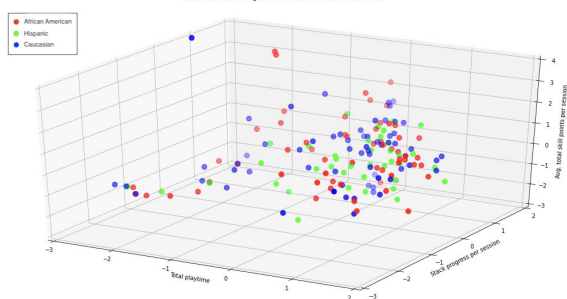




KMean clustering colored over with avatar genders



KMean clustering colored over with avatar id's



Insight

- Homogeneity in game experiences for the current student pool
- Avatar diversity,
- Game feature specialization,
- Player immersion to improve educational outcome in a more diverse student body

playtime

avgpt

stackpersess

Pid = 0.710
Pgen = 0.993

Pid = 0.577
Pgen = 0.799

Pid = 0.595
Pgen = 0.504