Towards Completion

Team Skeletal Hands
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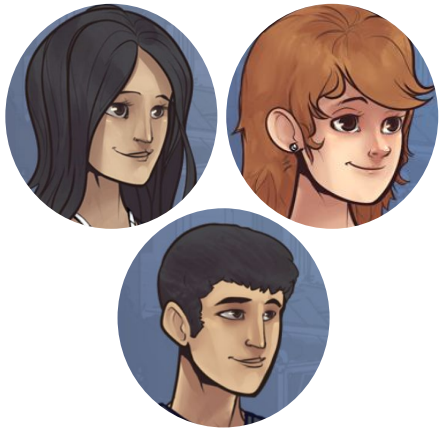
Idea & Approach

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?

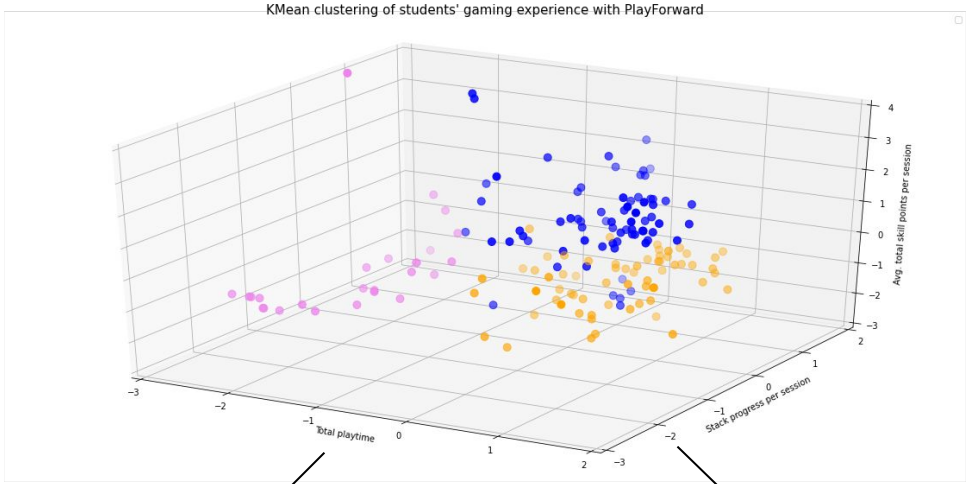
Tools

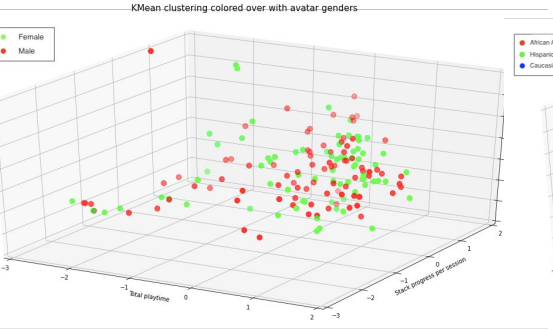
- **R:** data clean up & factor building
- **Panda:** data combination & manipulation
- **Sklearn:** data clustering & analysis
- **Matplotlib/Plotly:** 3D visualization

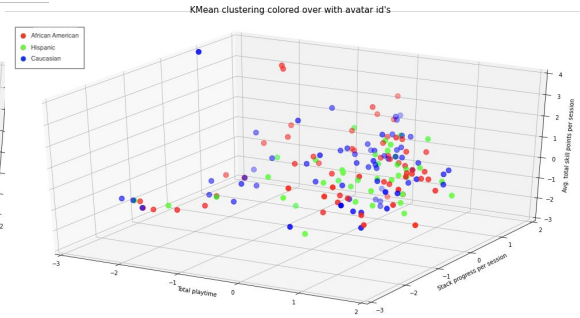


Approach

- 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







playtime	avgpt	stackpersess
Pid = 0.710 Pgen = 0.993	Pid = 0.577 Pgen = 0.799	Pid = 0.595 Pgen = 0.504

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