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?

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

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

<table>
<thead>
<tr>
<th>playtime</th>
<th>avgpt</th>
<th>stackpersess</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pid = 0.710</td>
<td>Pid = 0.577</td>
<td>Pid = 0.595</td>
</tr>
<tr>
<td>Pgen = 0.993</td>
<td>Pgen = 0.799</td>
<td>Pgen = 0.504</td>
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</tbody>
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