Factors of Performance for FIFA Ultimate Team Players
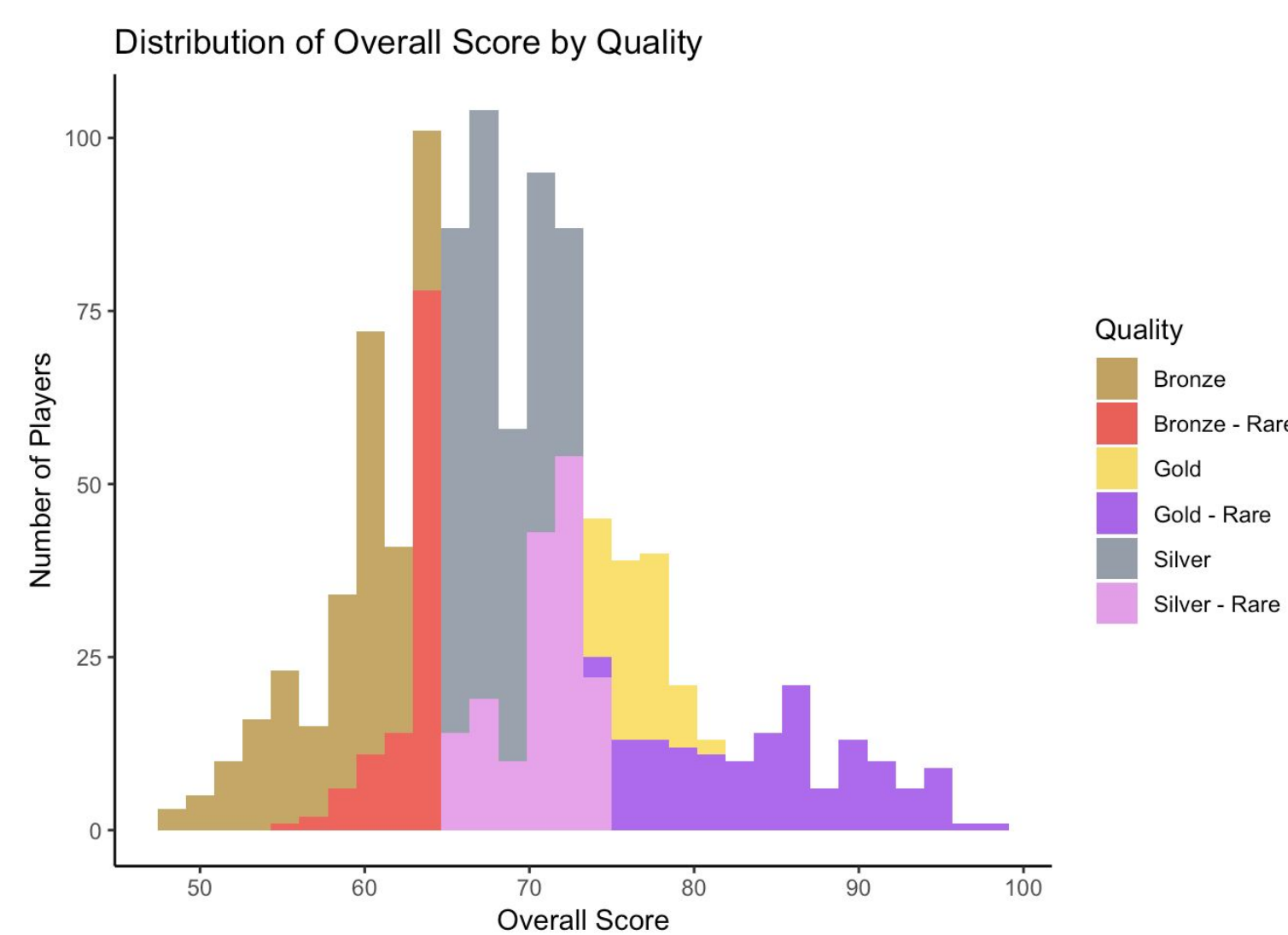
Romir Desai, Katherine Diaz, Sihan Dong, & Sankalp Patro

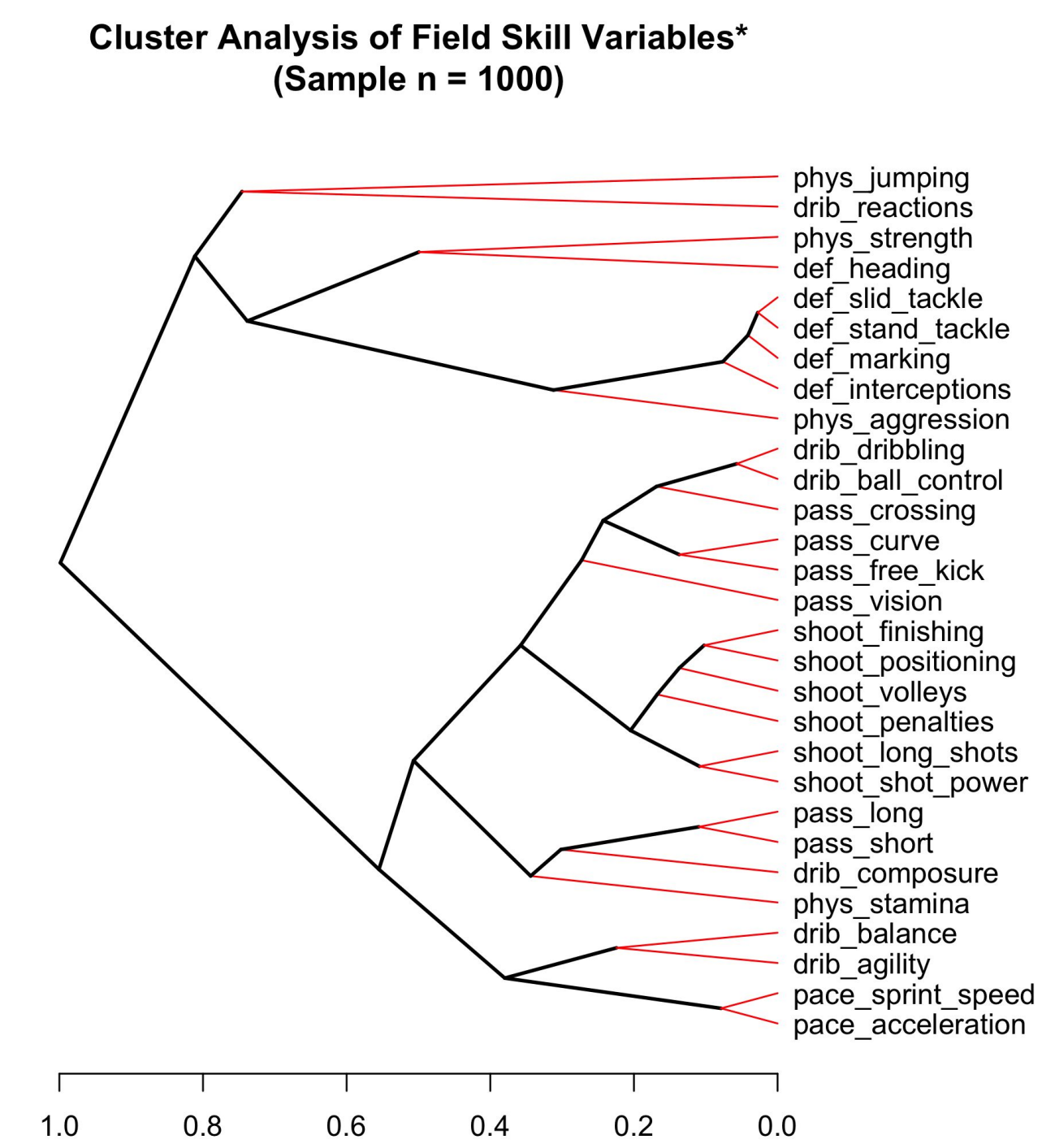Instructors: Matey Neykov, Statistical Graphics and Visualization (36-315)

Background

FIFA Ultimate Team is a video game that allows you to create your own team by purchasing players in an in-game marketplace. The game allows you to pick out of 21,256 players. Given information of the players include their name, nationality, price to purchase in each console, and their performance statistics such as pace, aggression, shooting, etc.
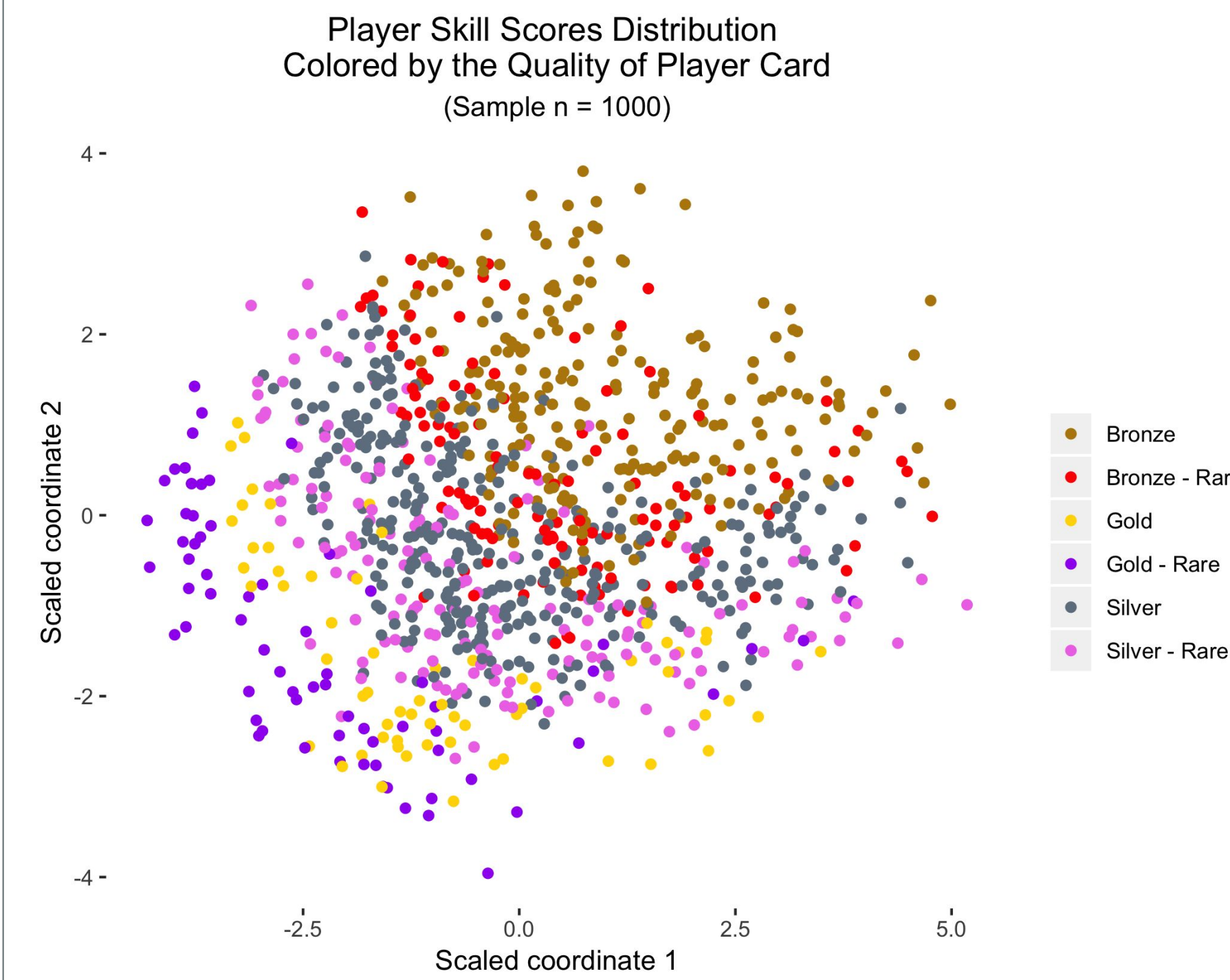
Overall Score and Quality of Players

Distribution of Overall Score by Quality

- Strong relationship between players' overall scores and quality
- Higher overall scores are 'gold – rare."

Analysis of Relationships among Player Skills and Qualities

Cluster Analysis of Field Skill Variables*
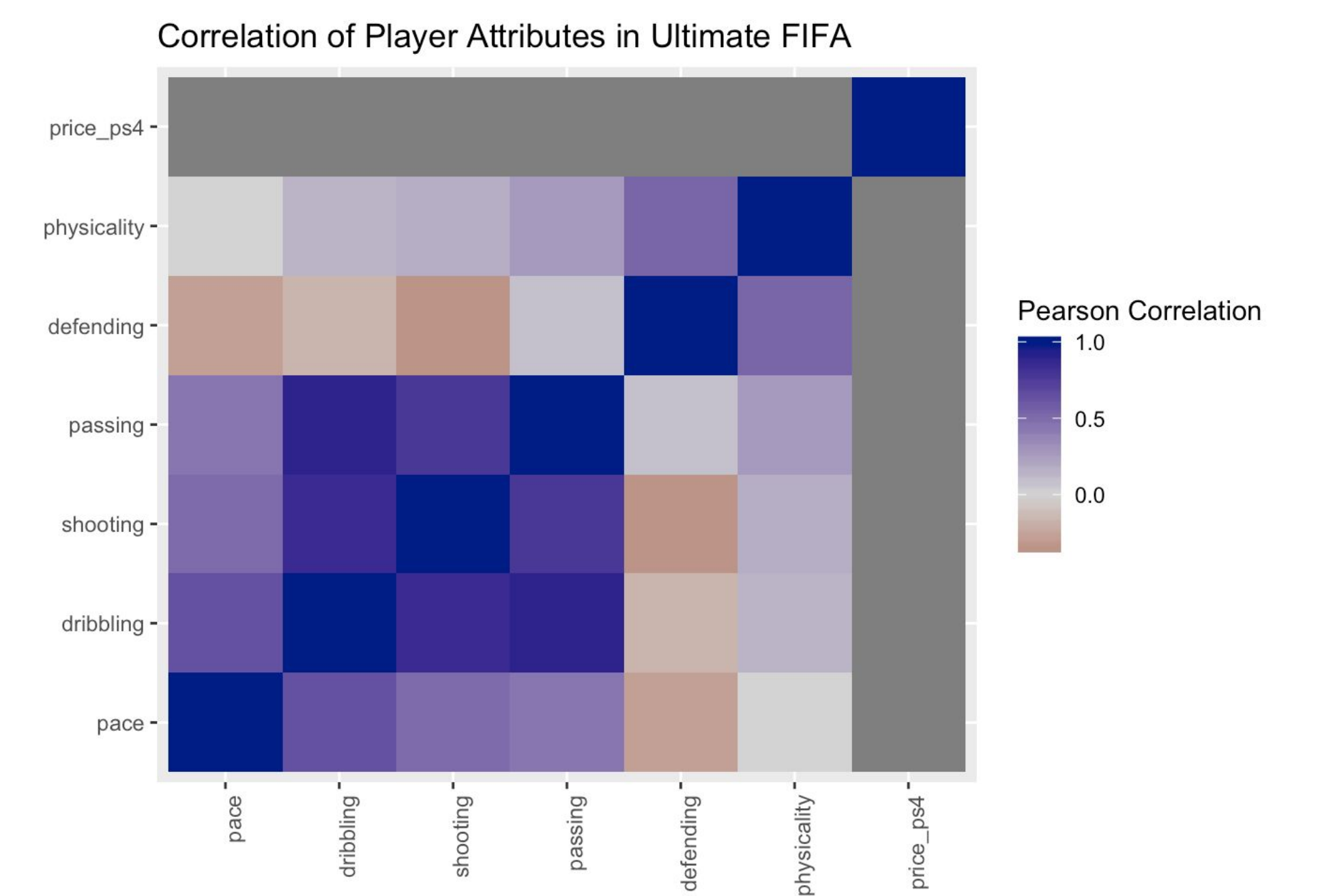(Sample n = 1000)

- Correlated with defending skills are many physical traits, as they are used in blocking other players.
- Footwork variables are closely correlated with each other and are key to offense.
- Stamina is a key physical trait to offense, as is aggression to defense.

Player Skill Scores Distribution
Colored by the Quality of Player Card
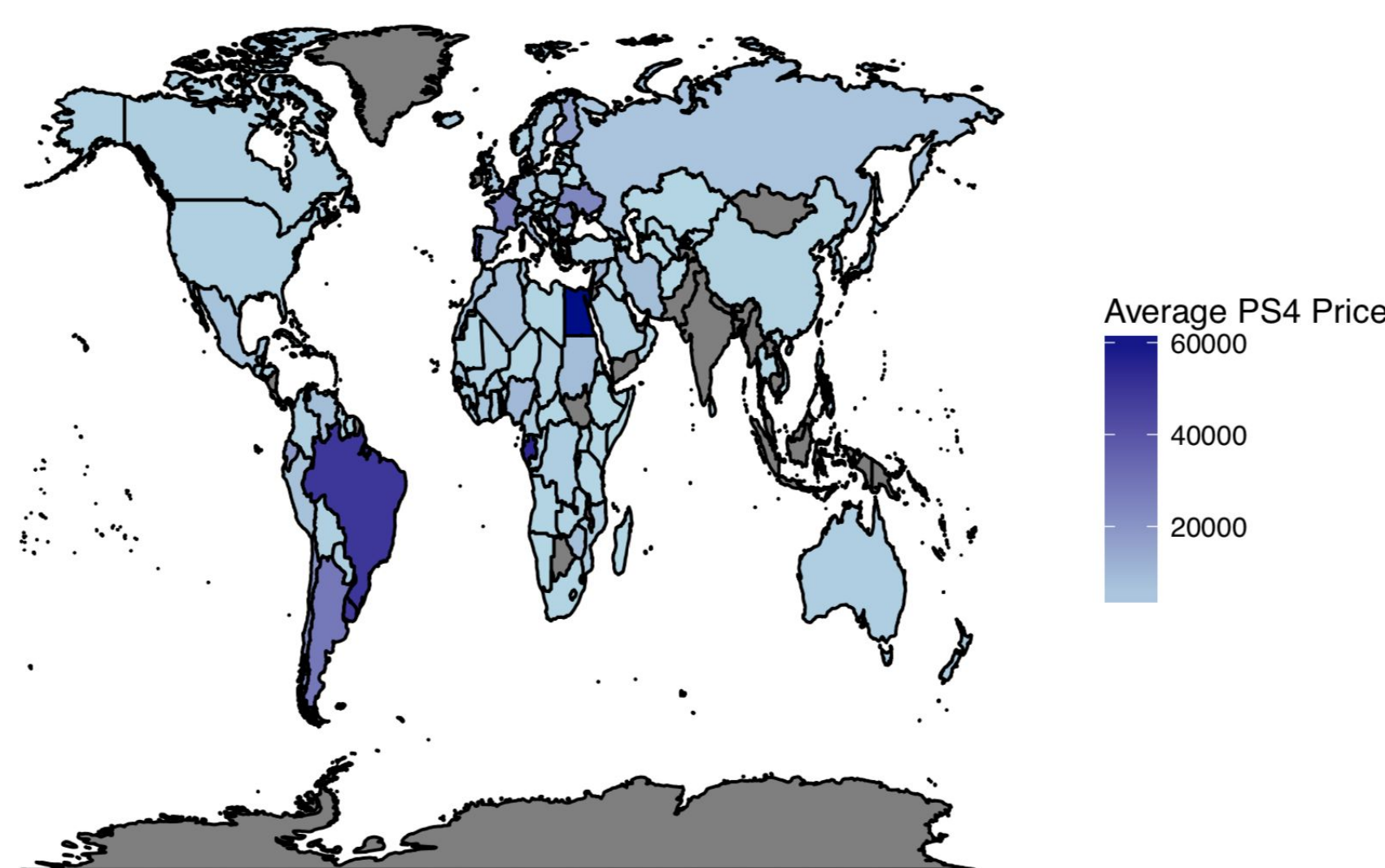(Sample n = 1000)

- There are clear clustering of different quality levels.
- Higher quality player cards cluster towards the bottom left, while lower quality player card cluster towards the top right .

Correlation of Player Attributes in Ultimate FIFA

- No player attributes correlate to their price.
- The variables that have the higher correlation to each other are the offensive attributes while defending is negatively correlated.
- Physicality does not strongly correlate with any of the player attributes.
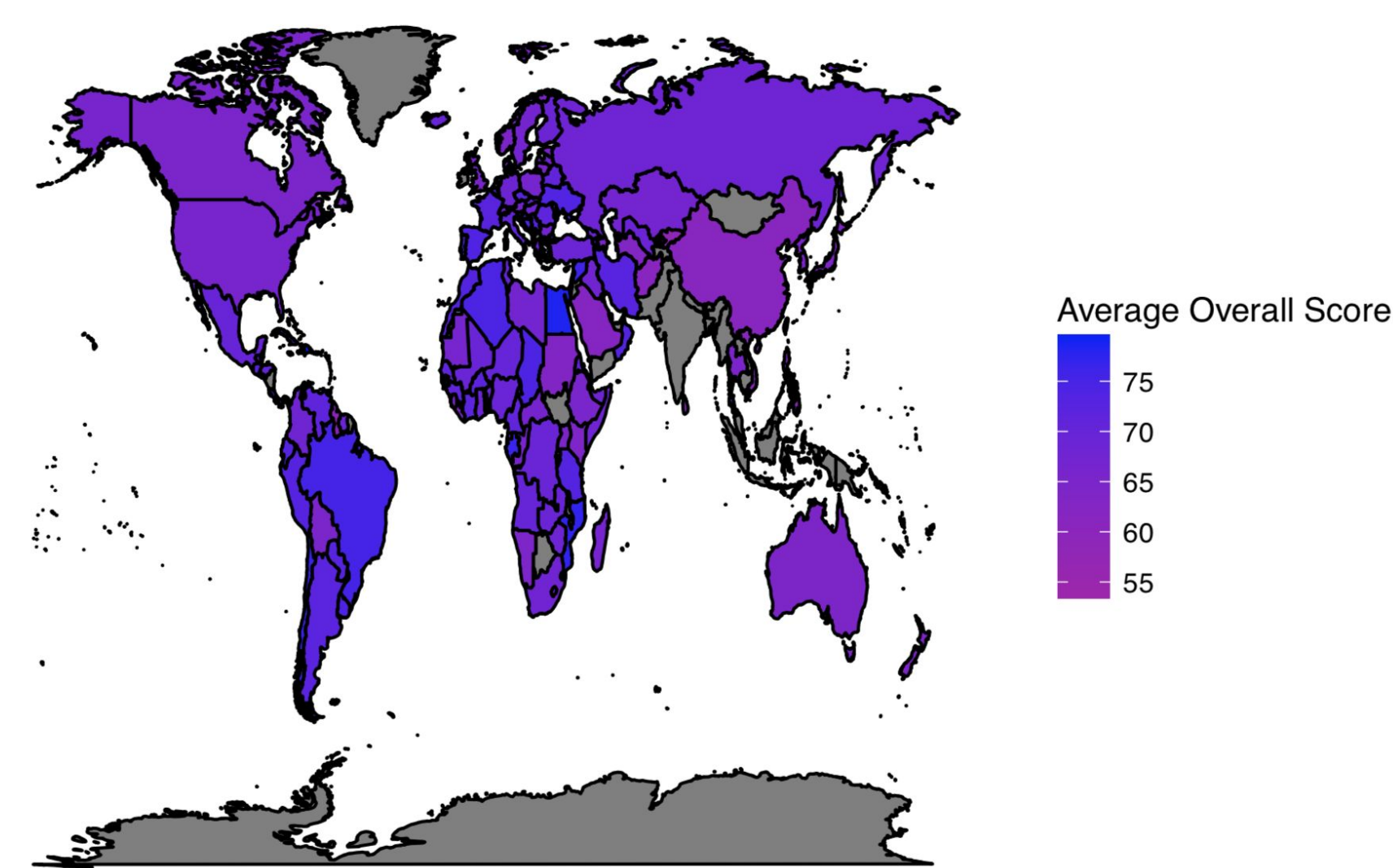
Analysis of Prices and Overall Score by Country

Average PS4 Price Per Country

- The prices of the players seem to vary with their nationality.
- They are highest if the player is from South America or Europe and lowest for Asian countries
- A chi-square test between average price and country shows price is not independent from country as p-value is less than 2E-16.
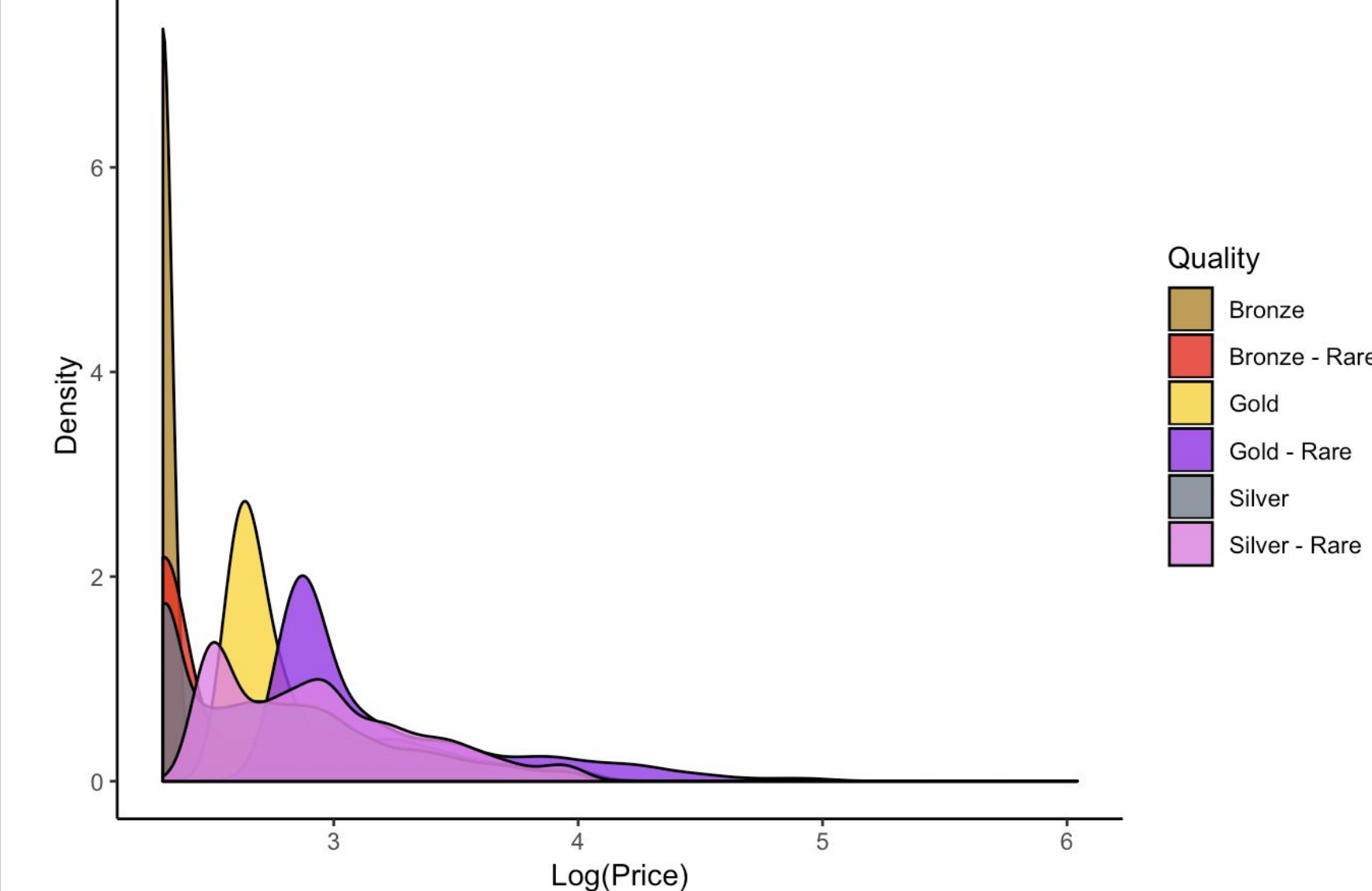

Max Overall score Per Country

- The average overall skill rating for countries appears to be positively correlated with price for the country.
- A chi-square test between overall score and region shows that a players skill rating is not independent of their origin country, as p-value is less than 2E-16.
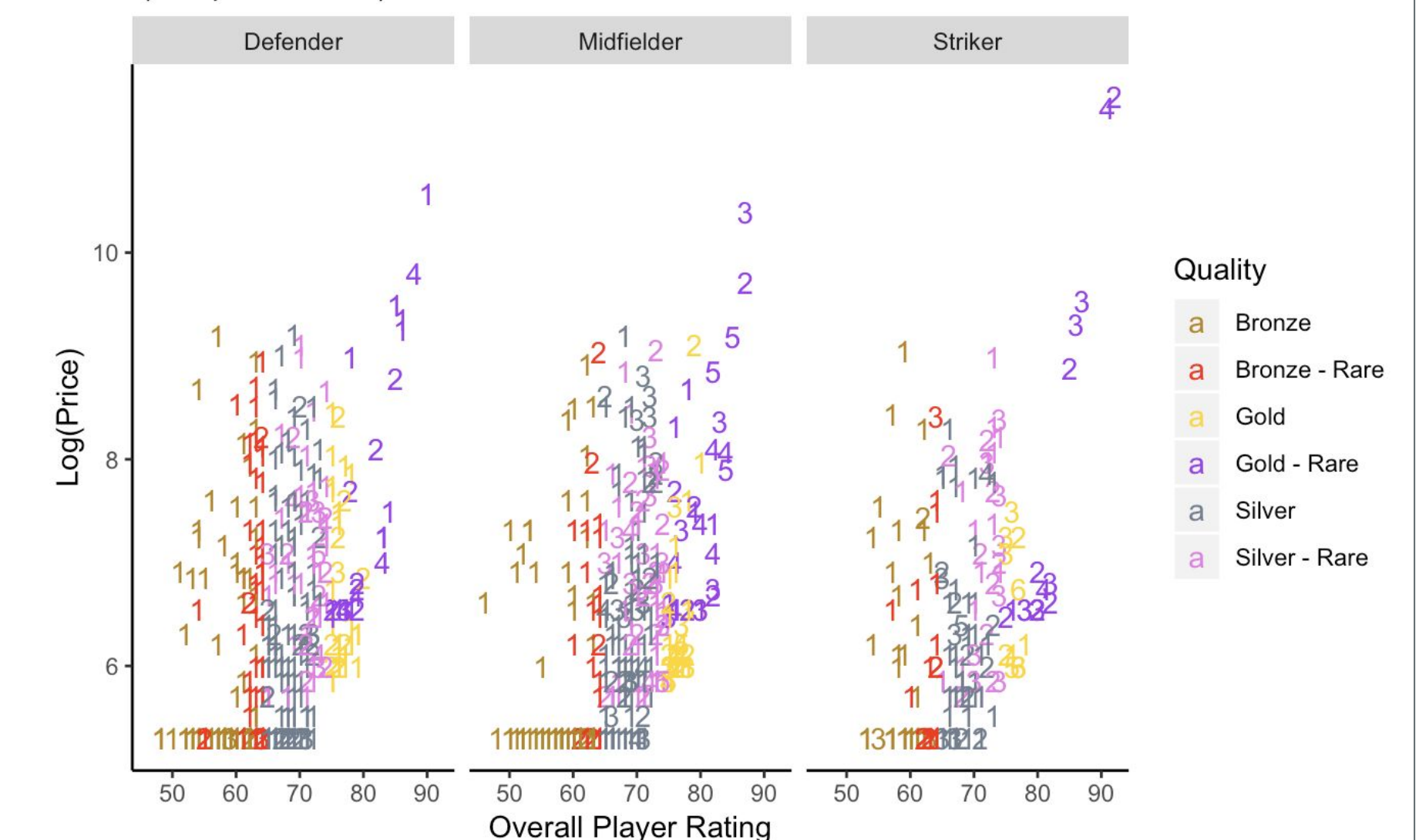
Analysis of Factors that Contribute to Price

Distribution of Player Price

- Most players, regardless of quality, are worth less than 2000 FIFA coins.
- Higher quality players are generally more expensive.
- Some of the quality types such as silver-rare and gold-rare seem to have some extreme outliers.

Player Traits in Relation to Rating and Pricing
One graph for each position type
(Sample n = 1000)

- The relation between price and overall rating seems to be the similar for all positions.
- Lower quality players seem to have less traits.
- There does not seem to be a strong relation between number of traits and price.