Web Scraping The NFL Draft

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National Football League

- Average franchise value: **$2.3 billion**.
- **$$$** in advertising, marketing, sales …

- And …

People Love Football!

NFL Team

- 32 teams

- 53 players per team:
  - **Offense**: Quarterback, running back, tight end, wide receiver, guard, tackle.
  - **Defense**: End, tackle, linebacker, cornerback, safety.

Where Players Come From

- Colleges
  - Part of conferences, somewhat regionally established.
- Drafted by NFL teams in yearly draft.
- 7 rounds
  - Draft order is from worst team in previous season to best.
  - Teams can trade draft positions for strategic purposes.

Draft Decision Making

- NFL teams scout college players year around.

- Prior to the draft, college players perform physical and mental drills at the NFL combine.

- Teams invest **$$$** trying to select great players.
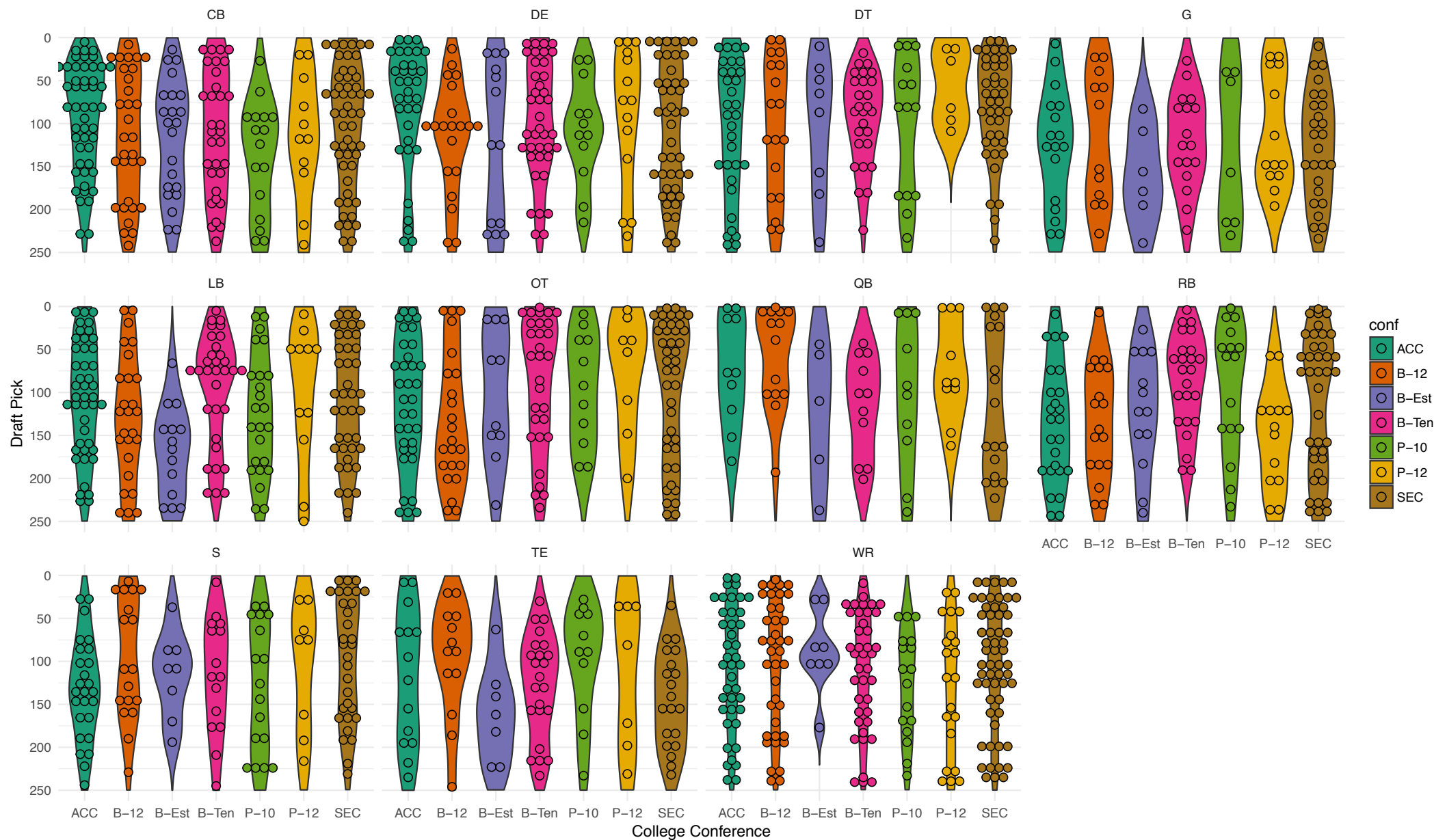
Project Question

- Can data science inform us about the NFL draft process?
  - What positions and conferences are selected preferentially within the 7 rounds?

Data Science Methods

- **Scrapy** for web scraping:
  - Wikipedia pages from the last ten years of NFL drafts.
    - Round, pick, team, player, position, college, conference.
- R **ggplot 2** for data visualization.

2006–2016 NFL Drafts

Future Directions

- Draft selection changes over *time*.
  - May reflect game strategies.
- Compare draft selections with player *performance* metrics.
- Compare drafts of *successful* teams (New England Patriots, Green Bay Packers) *vs. unsuccessful* teams (Cleveland Browns, Jacksonville Jaguars).