

## Predicting pathways of male and female AFL player success

Minh Hyunh, Ignacio Alvarez, Dianne Cook

19 September 2025

### Topic

A common question in Australian rules football is how well state-level (VFLM, VFLW) performance translates into success at the elite level (AFLM, AFLW).

- Raw comparisons between state-level and elite players are biased: only a subset of state-level athletes are drafted, and they may already differ in age, position, or performance profile.
- Propensity score matching (PSM) provides a way to create comparable groups of players, balancing observed characteristics before comparing outcomes.
- With the [fitzRoy R package](#), researchers can access both match and player statistics from AFL Tables, making it possible to conduct a rigorous causal-style analysis of talent pathways.

### Plan

1. Use the [fitzRoy](#) package to collect historical player-level data.
2. Organise the data to contain statistics for players in state and elite level.
3. Explore the statistics and demographics of players that didn't transition to elite level.
4. Subset to players who made the transition.
5. Conduct clustering of state-level players into groups based on demographics, age, height, position.
6. Use PSM to match players who transition with similar players who do not.
7. Estimate the “treatment effect” of elite selection on subsequent performance outcomes, and test whether state-level performance indicators predict elite-level success.

