**Research Task 7: Ethical Implications of Decision Making**

**Title & Purpose**

**Decision Support Report for Syracuse Women’s Lacrosse**  
Purpose*:* Provide actionable recommendations on strategy, training, and player development based on 2025 season data, with ethical and reliability considerations.

**Executive Summary**

**Our analysis of the 2025 Syracuse Women’s Lacrosse season highlights both offensive strengths and late-game challenges.**

**Key Recommendations:**

* **Operational (Low Risk):**
  + **Increase late-game endurance and decision-making drills to address scoring drop-offs.**
  + **Leverage Emma Ward’s offensive efficiency with tailored offensive sets.**
* **Investigatory (Medium Risk):**
  + **Conduct controlled trials to measure turnover patterns and conditioning effects.**
  + **Collect additional player workload and fatigue metrics.**
* **High Stakes (High Risk):**
  + **Any roster or personnel changes should be reviewed under HR and legal frameworks.**

**Confidence Statement: Findings are based on reproducible descriptive stats, but uncertainties remain regarding injury data, conditioning records, and contextual game variables. Confidence: *Moderate*.**

* **Background & Decision Context**

**Stakeholders:** Coaching staff, athletic director, performance analysts.  
**Decision:** Prioritize training and strategy for improved outcomes.  
**Risk Level:** *Medium* — impacts player development, performance, and potential roster considerations.

**Data & Methods**

* **Source:** Syracuse Women’s Lacrosse 2025 season statistics (Task 05).
* **Process:**
  + Prompts and outputs from LLM analysis
  + Converted into synthetic stakeholder interview (Task 06)
  + This report validates and extends those outputs with uncertainty, fairness, and robustness checks.
* **Tools:** Python (stats, bootstrapping), visualization packages, Elevenlabs.io for Task 06 audio

**Findings**

1. **Games Played:** 19.
2. **Offense vs Defense:** Offense is the stronger lever for improvement; Emma Ward identified as game-changer.
3. **Most Improved:** Joely Caramelli (improvement score = 75).
4. **Late-Game Fatigue:** Goals drop from **74 in 1st period** to **47 in 4th period**.
5. **Neutral Sites:** None played in 2025.
6. **Efficiency:** Emma Ward leads with best scoring-to-turnover ratio.

**Recommendations (Tiered)**

* **Operational (Low Risk):**
  + Add endurance-focused late-game drills.
  + Use Emma Ward as focal point in offensive schemes.
* **Investigatory (Medium Risk):**
  + Monitor turnover rates systematically.
  + Collect fatigue data during practices to validate late-game dips.
* **High Stakes (High Risk):**
  + Personnel or roster adjustments only after ethical/legal review.

**Ethical & Legal Concerns**

* **Bias:** Avoid over-reliance on star players; ensure fair development opportunities.
* **Privacy:** Only public stats used. Any biometric or health data collection must follow NCAA and HIPAA guidelines.
* **Transparency:** All AI-generated narrative text is labeled (from Task 05 & 06)

**Next Steps & Validation Plan**

* Collect additional season data (2025).
* Apply bootstrap confidence intervals for turnover and fatigue analysis.
* Test recommendations in controlled scrimmages.
* Archive reproducibility artifacts (code, prompts, transcripts).

**Appendices**

* **Appendix A:** LLM prompts & outputs (Task 05)

llm\_prompts

* **Appendix B:** Task 06 process documentation

README\_process

* **Appendix C:** Synthetic interview transcript

transcript

* **Appendix D:** Scripts, logs, seeds (to be included in repo)