Norms, Compliance, and Credit

Evaluating EDM in Context

Dr. Collin F. Lynch
Hayden Lawrence

Overriding Issues

- What norms should govern educational data mining?
- How do we implement those norms and verify compliance?
- How do we quantify harms and assign credit with multiple actors?

Norms

- "Achieve greater learning outcomes" while "customizing the learning experience for each student" – Department of Education

- How should this be represented? Shallow models? Deep models?

Restraints

- Privacy
- Discrimination
- Fairness

Compliance Verification

- A Priori Compliance Proof
- Runtime Verification
- Post-Hoc Audits

Harm Quantification

- Some harms, such as discrimination in classification can be bounded a priori

- Gestalt measurement after the fact is often more practical

    - But when is the harm noticeable and significant?

Credit Assignment

- Difficult to assign credit for a student or class's success or failure
    - Multiple agents
    - Long time span
- Breaking down a task into many small tasks with micro-assessments?

Conclusion

- What the norms and restraints are is somewhat unclear
- Models of representation of norms and restraints are limited
- It can be difficult to detect harms as they occur
- Some can only be detected after the fact

Questions?

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