Academic Advising Assistant

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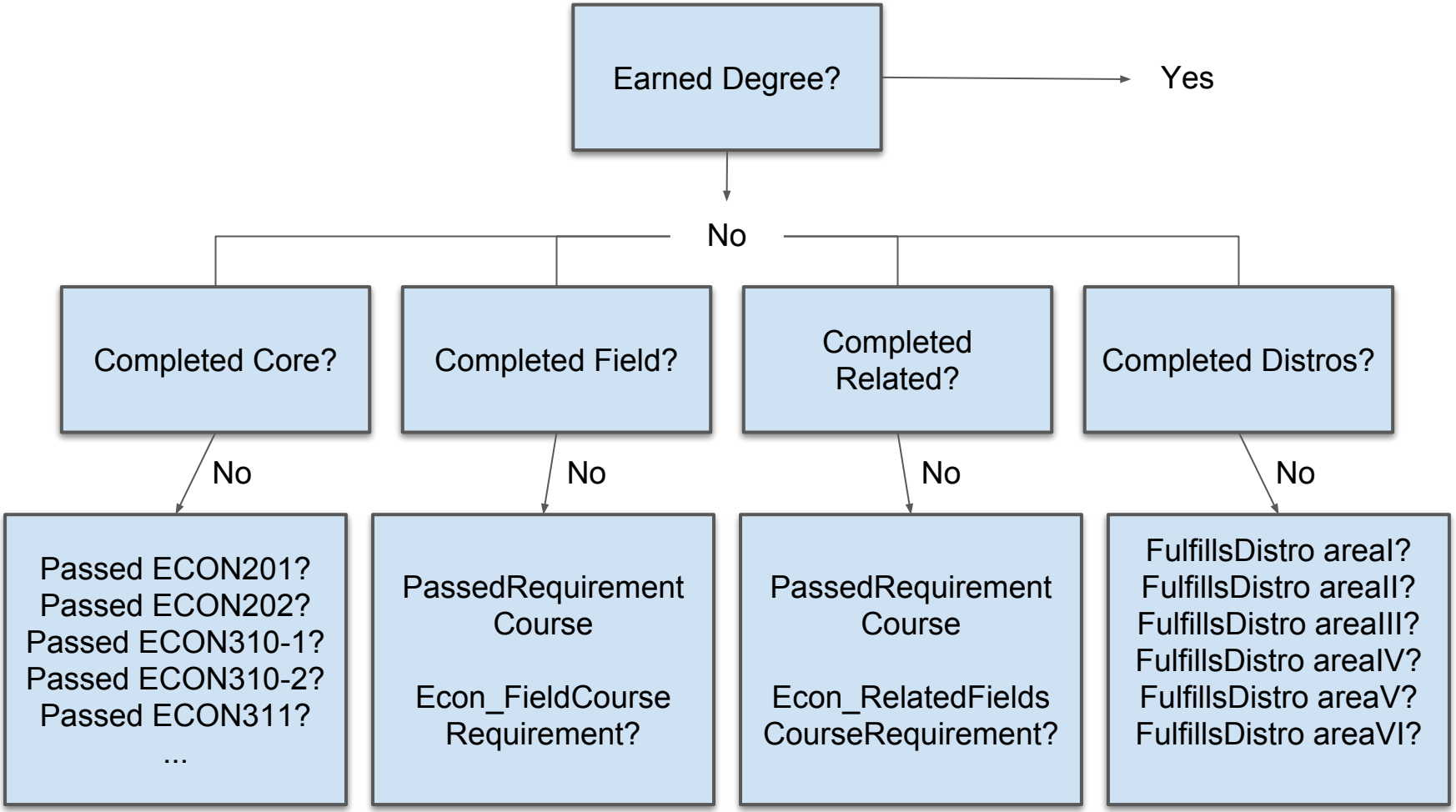
EECS 371: Winter 2019

Motivation

- Help students plan out their Northwestern degree
  - Provide uniform advising experience for students and advisors
  - Reduce professor advising workload
- Implement interesting reasoning workflow
  - More on this later

Related Work

- “Degree Progress” in Caesar
  - Shows what classes a given student has taken and what requirements they have and have not completed
- McCormick Advising System (MAS)
  - McCormick’s home-baked solution for engineering students only
  - In addition to the resources that Caesar already provides
- Serif.nu (but this is for class scheduling)


Earned Degree?
Yes
No
Completed Core?
Completed Field?
Completed Related?
Completed Distros?
No
No
No
No
Passed ECON201?
Passed ECON202?
Passed ECON310-1?
Passed ECON310-2?
Passed ECON311?
...
PassedRequirement Course
Econ_FieldCourse Requirement?
PassedRequirement Course
Econ_RelatedFields CourseRequirement?
FulfillsDistro areaI?
FulfillsDistro areaII?
FulfillsDistro areaIII?
FulfillsDistro areaIV?
FulfillsDistro areaV?
FulfillsDistro areaVI?

Representation & Reasoning

```
(<==(earnedDegree ?student ?major)
    (completedCore ?student ?major)
    (completedElectives ?student ?major)
    (completedRelated ?student ?major)
    (completedDistroRequirement ?student))
```

Modeling Economics

```
(<== (completedCore ?student Economics)
    (passed ?student ECON201)
    (passed ?student ECON202)
    (fulfills ?econometrics Econ_EconometricsRequirement)
    (passed ?student ?econometrics)
    (passed ?student ECON310-1)
    (passed ?student ECON310-2)
    (passed ?student ECON311)
    (passed ?student MATH220)
    (fulfills ?stats Econ_StatsRequirement)
    (passed ?student Econ_StatsRequirement))

(fulfills ECON381-1 Econ_EconometricsRequirement)
(fulfills ECON281 Econ_EconometricsRequirement)
(fulfills STAT210 Econ_StatsRequirement)
(fulfills MATH314 Econ_StatsRequirement)
```

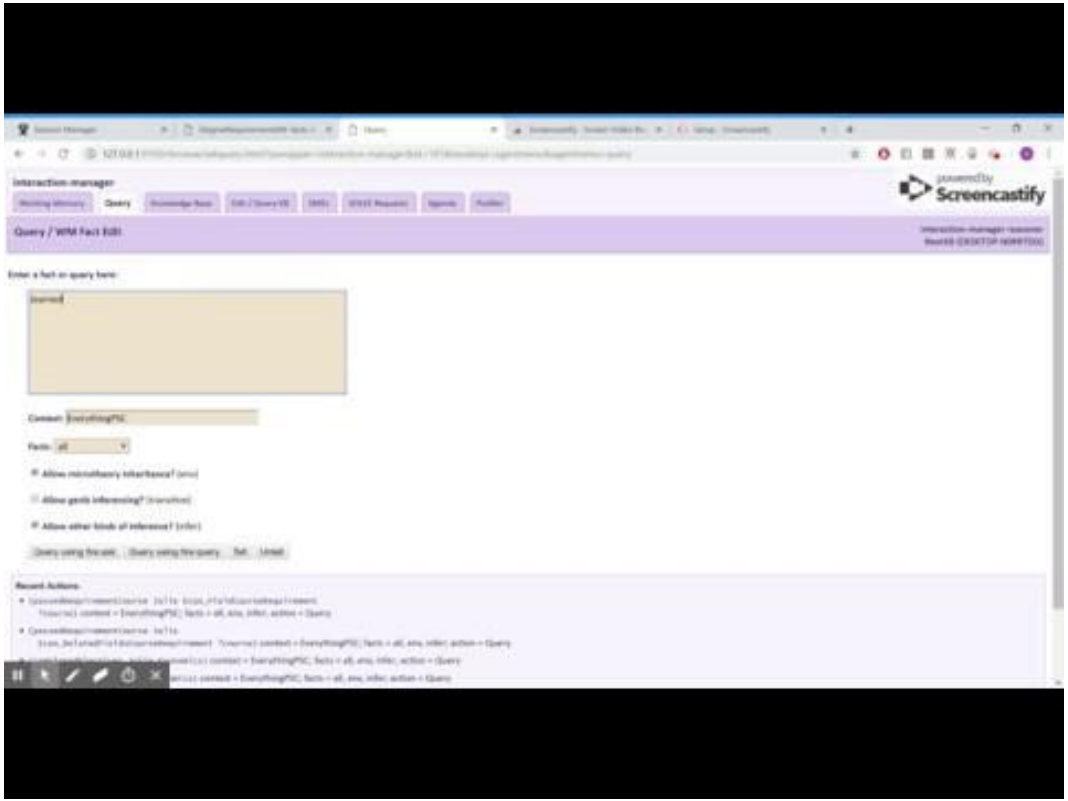
Modeling Economics

```
(<== (passedRequirementCourse ?student ?requirement ?course)
    (passed ?student ?course)
    (fulfills ?course ?requirement))


(<== (completedElectives ?student Economics)
    (completed ?student Econ_FieldCourseRequirement))

(<== (completed ?student Econ_FieldCourseRequirement)
   (passedRequirementCourse ?student Econ_FieldCourseRequirement ?course1)
   (passedRequirementCourse ?student Econ_FieldCourseRequirement ?course2)
   (passedRequirementCourse ?student Econ_FieldCourseRequirement ?course3)
   (passedRequirementCourse ?student Econ_FieldCourseRequirement ?course4)
   (passedRequirementCourse ?student Econ_FieldCourseRequirement ?course5)
   (passedRequirementCourse ?student Econ_FieldCourseRequirement ?course6)
   (different ?course1 ?course2 ?course3 ?course4 ?course5 ?course6))
```

Demo


interaction-manager
Query
Query / WM Fact Edit
Enter a fact or query here:
Context:
Facts:
Recent Actions

Questions?