Temporal Event Sequence Recommendation

A Visual Analytics Approach

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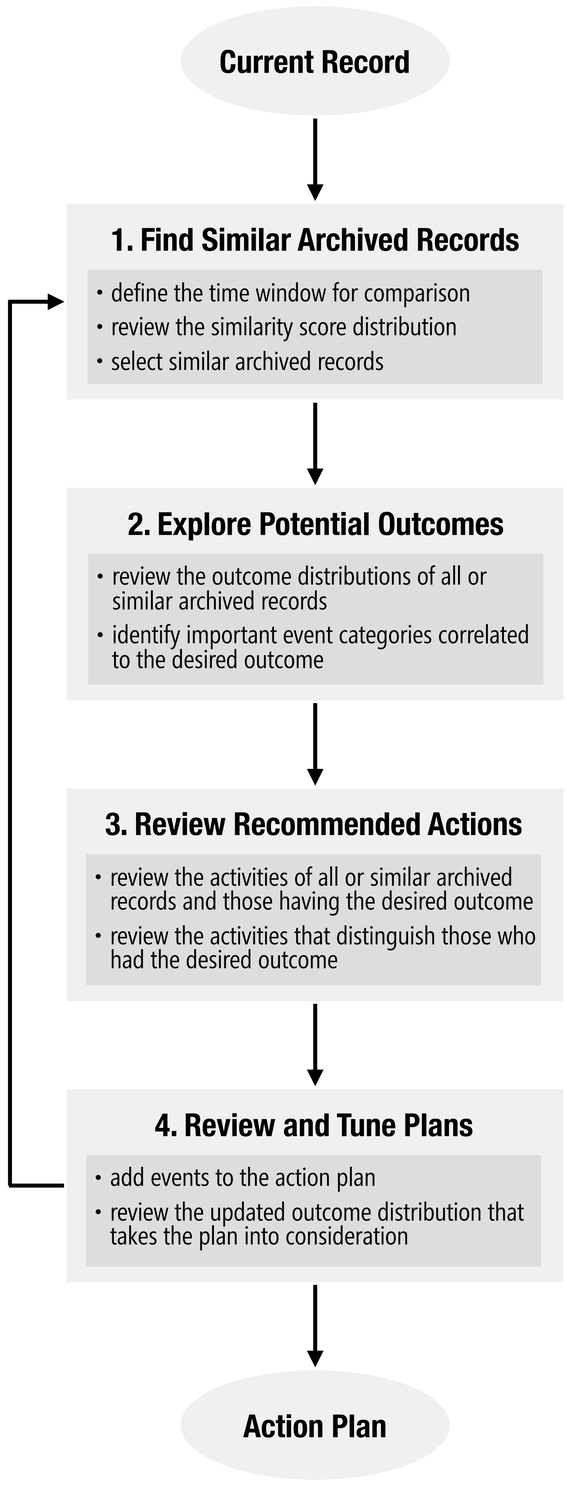


EventAction

A prescriptive analytics tool designed to present and explain recommendations of temporal event sequences:

- Identify similar records
- Recommend event sequences that might help achieve the users' goals
- Identify key steps in the recommended event sequences
- Interactively assist users as they define a personalized action plan

Usage Scenarios:

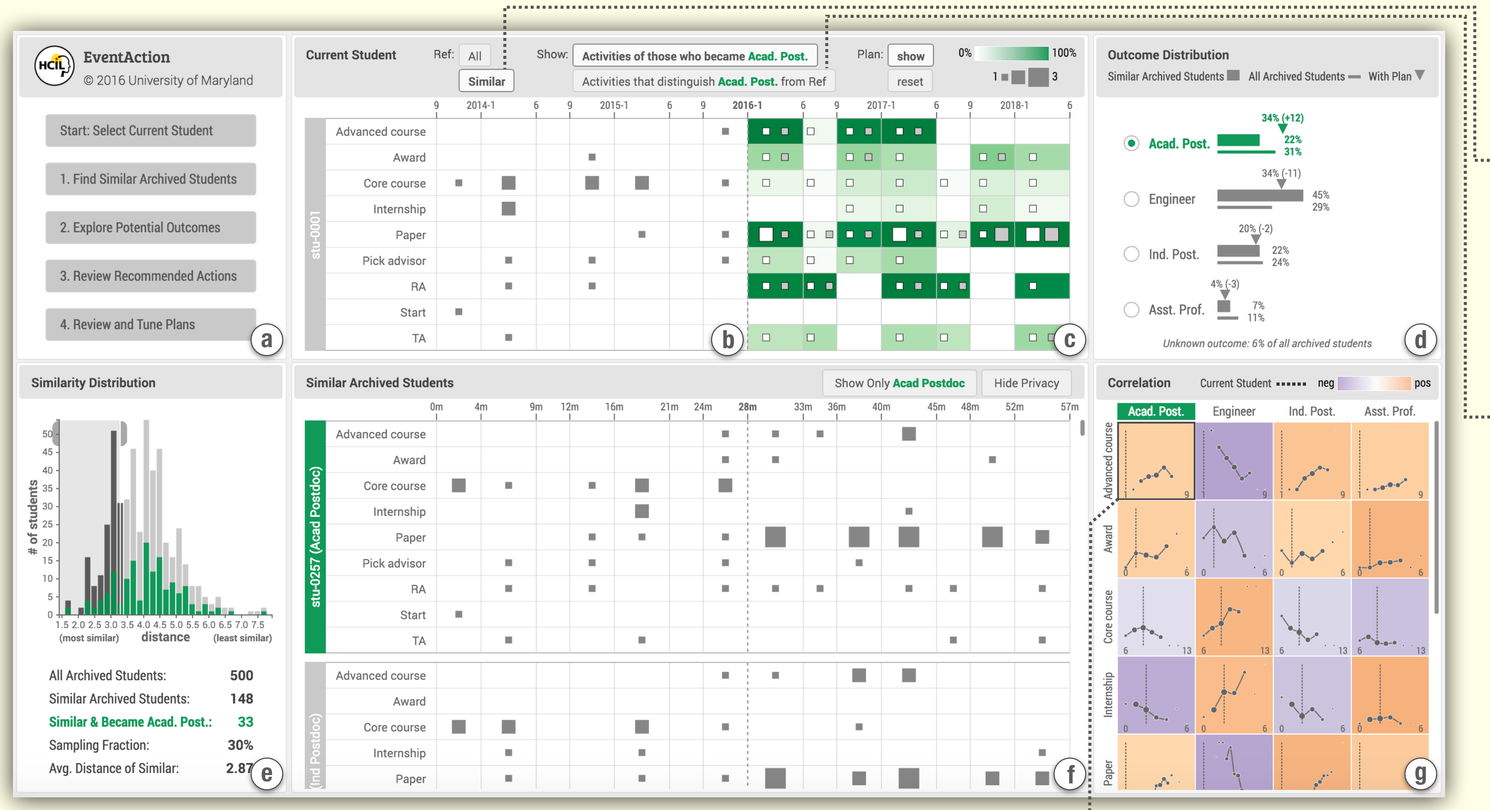
- Consultant exploring alone
- Consultant guiding an advisee
- Advisee making action plans alone

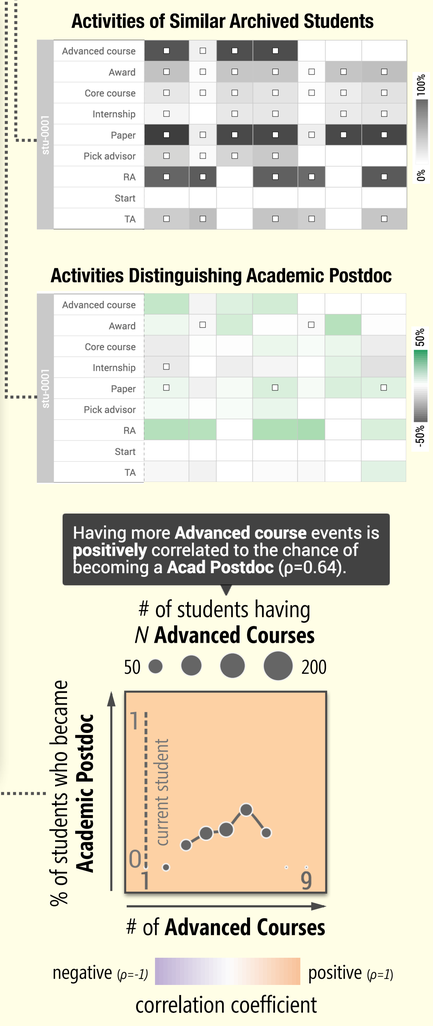
Potential Applications:

- Student advising
- Customer retention
- Medical treatment formulating
- Sports coaching

Website

Video





Interface: the user interface consists of seven coordinated views, opening progressively as the analysis progresses: (a) workflow control panel, (b) current record timeline, (c) activity summary view, (d) outcome distribution view, (e) similarity distribution view, (f) similar archived record timelines, and (g) correlation view.

Case Study: this figure illustrates a synthetic dataset of 500 archived students, including features observed in real data. The recorded event categories are academic activities such as taking courses, winning awards, and publishing papers. The students' first placements are used as possible outcomes, which are categorized into four types, including software engineer, industrial postdoc, academic postdoc, and assistant professor.

Visit hcil.umd.edu/eventaction for more information

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