

The Team

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Vision

Create an **interactive, dynamic graph visualization of course prerequisites** at a university. This aids **long-term degree planning** and **course discovery**.

[UW IT](#) and the [MyPlan](#) team support this project. If successful, **parts of this project may be integrated into MyPlan.**

Architecture

- Periodically read, parse, and process course data from UW's course catalog API.
- Django (Python) used for graph storage, serving AJAX requests, and managing client session state.
- Client-side graph visualization and interface written in Javascript, backed by AJAX.

Challenges

Usability: Identifying users' needs through user research, and designing an interface that meets those needs.

Graph representation: Course prerequisites are logical expressions (e.g. CSE 332 OR CSE 326). We will need an efficient and queryable representation of these relationships.

Graph algorithms: Automating the discovery of sets of prerequisite courses that enable a student to take more advanced courses.

Efficient architecture: Minimizing server-side computation to allow the system to gracefully scale to all of UW.