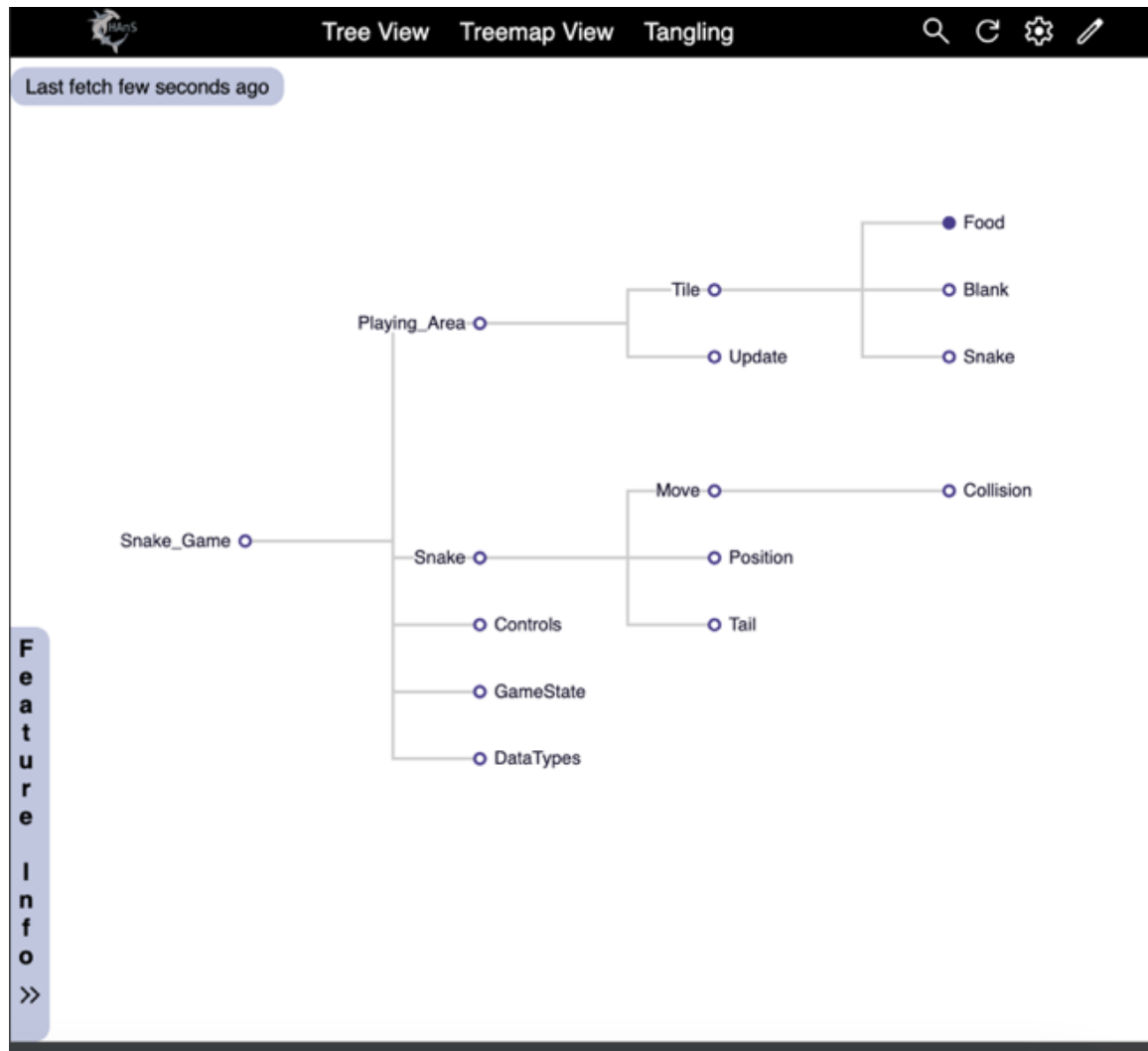# A Brief Introduction to HAnS-Viz Plugin

HAnS-Viz Overview

- It's a plugin developed for HAnS

- Visualizes feature metrics, such as tangling and scattering

  provided by HAnS

- Several feature-model visualizations, such as Tree View and

  Tree Map View

HAnS-Viz -Views

HAnS-Viz -My Task

Motivation:

- Projects increase in size and complexity over time

- This problem is addressed by the concept of feature-oriented software

- Organizes the evolution of software around features

- Utilizes feature traceability to track features history

- Git tracks code changes but lack support for tracking feature-level changes

- Needs tools between Git and IntelliJ to visualize the history of features within projects

- Without such a tool, developers have to manually track features history

The Task:

Extending HAnS and HAnS-Viz to support the visualization of features history, based on Git:

- Displaying a timeline of feature existence based on commits to assist developers in understanding features history

- Dispalying deleted features to assist developers in finding features that have been removed from a project over time
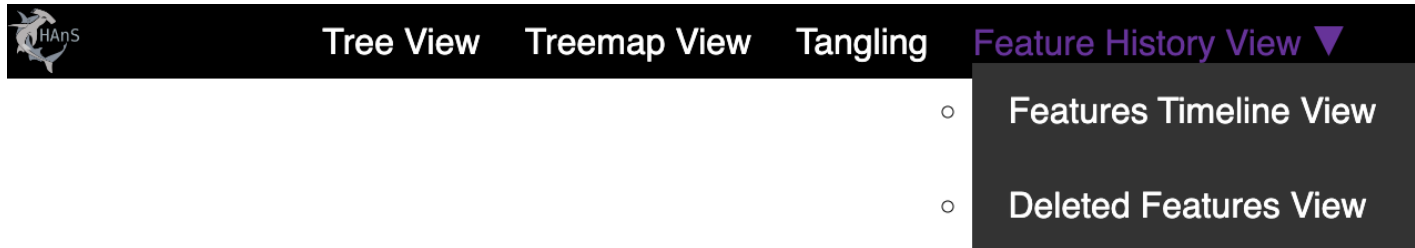
Feature History View

- A new window in the navigation bar called Feature History View
- Has two views, one for the timeline and one for the deleted features

Timeline:
-Feature names on x-axis
-Commit times on y-axis
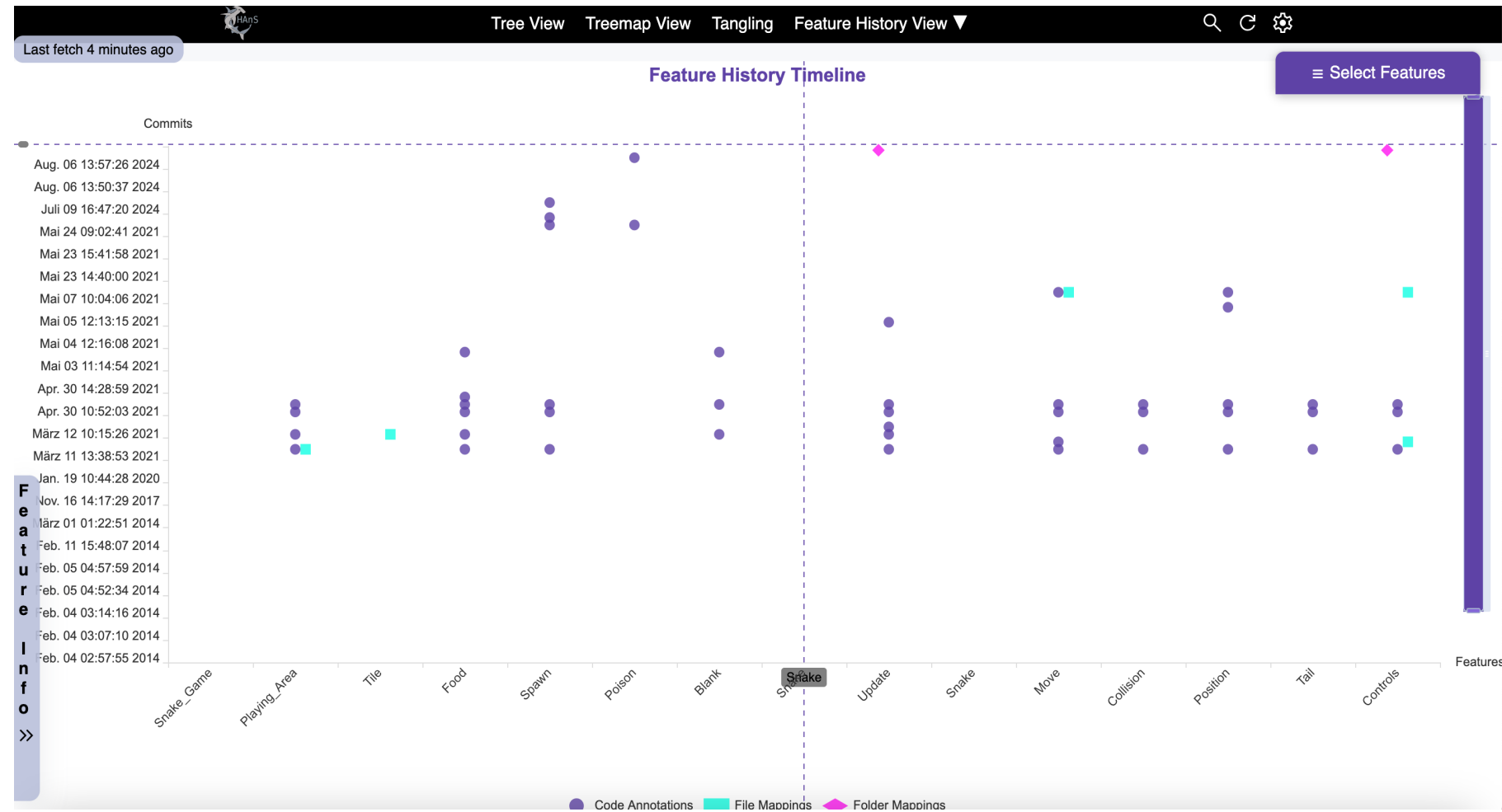-Scattering points on the chart that indicate when a particular feature existed at a specific commit time

Deleted Features:
-Deleted features are mapped to the last commit times in which they were active before being removed from the feature model.

Feature Timeline View

- Dispalys three types of annotations

- Draggable bars alongside the axes to focus on a subset of data

- Dispalys the history of up to 15 features at a time

Deleted Features View

- This view allows you to track when each feature was last present in the codebase before deletion.

- Users can also click on the hash to copy it directly.