

# JusticeAI Iteration Summary

## *Iteration 12*

### Team Members

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### Project Summary

[JusticeAI \(ProceZeus\)](#) is a web chat bot that aims to facilitate access to judicial proceedings involving specific domains of law. Users will have the ability to converse with the chatbot, describing in detail the situation for which they wish to pursue litigation. The system, which will leverage the power of machine learning and natural language processing, will guide the user through a process wherein they'll be prompted with a series of questions relating to their potential case allowing the system to ultimately determine, based on provincial jurisprudence, whether the user has a valid case worth pursuing in the judicial system. Alternatively, the system may also suggest remedies in lieu of legal action if it is deemed unlikely to be in the user's best interest.

### Velocity

The primary focus of iteration 12 was to polish certain aspects of the user experience in order to make the product more functionally complete. This included changes to the user interface to make it more stable, fix any errors detected during team demos, and rewriting the bots questions and responses to sound more natural. In addition to this, certain functional aspects of the system such as the regex library for extracting dates from our precedents were revised to provide more accurate predictions.

During this iteration, we were able to complete **22 story points** along with **1 bugs / developer stories**.

The following is a list of user stories that were completed in [Iteration 12](#):

- #409 - [Cursor should be change to a pointer for legal definitions \(1 Point\)](#)
- #408 - [Transpose the similar cases table in the dashboard \(1 Point\)](#)
- #407 - [If you refresh, the chatbot progress is empty \(Bug\)](#)
- #406 - [Show a "No Regressors" message when there are no regressors to display on the dashboard \(1 Point\)](#)
- #403 - [Enter to submit response \(1 Point\)](#)
- #401 - [Verify Regular Expression for Dates \(5 Points\)](#)
- #400 - [Rewrite Chatbot sentences so that they are correctly understood by users Chatbot \(3 Points\)](#)
- #371 - [See similar cases \(5 Points\)](#)
- #369 - [Ask when the tenant paid you last Chatbot \(5 Points\)](#)

### Plan for Next Iteration

In Iteration 13, we will focus primarily on improving the documentation of the code base. While we have maintained some degree of documentation, all of it will be updated to accurately reflect the state of the systems once the project is completed, allowing for a smooth handoff to any open source developers that wish to continue the project. Additionally, small tweaks will be made to the prediction system to make predictions a bit more understandable and useful to the user. We will also give a final sweep of bug fixes, tweaks and general improvements to the RegEx analyzing the legal cases.

A total of **20 story points** and **1 bug** are planned to be completed next iteration. Shown below are the stories that we will be working on for [Iteration 13](#):

- #425 - [Fix Date Regex \(Bug\)](#)
- #412 - [As a user I want the system to predict how much total money I will receive from a case \(Points 3\)](#)
- #405 - [DEV STORY: Update microservice READMEs \(Points 8\)](#)
- #404 - [Focus on the input fields of conversation \(Points 1\)](#)
- #402 - [Create a ReadTheDocs Page for Procezeus \(Points 5\)](#)
- #399 - [Calculate indemnity fee \(Points 3\)](#)

### Noteworthy Achievements

- Fixed various interface bugs
- Improve interface experience by adding static sidebar and transposing some tables
- Made bot responses sound more natural
- Added links to similar cases returned by the bot in dashboard
- Improved date extraction from precedents for better predictions

## Technology, Architecture and Library Changes

No major technology or architecture have been made in Iteration 12. One additional library, [MdBook](#), was added to our project. It allows for the rendering of our READMEs and documentation as a publically available website. It is currently being hosted at <https://cyberjusticelab.github.io/JusticeAI/docs/rendered/>.

## Continuous Integration Processes and Naming/Coding Changes

No continuous integration processes or naming or coding changes were made during this iteration.

## Unit Tests and Code Coverage

Line coverage after Iteration 12 is currently at 70.86%. The code coverage increased slightly from the coverage at the end of iteration 11, which was at 70.42%. This is due to code cleanup and refactoring our system's code.

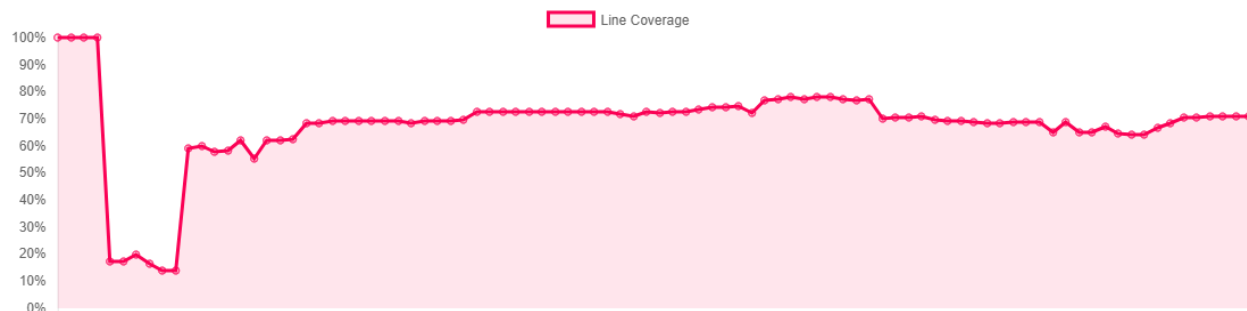


Figure 1. JusticeAI Line Coverage Over Time

## Iteration 12 Retrospective

### What went well

- Nearly all stories were completed
- We arrived at the polishing phase in a timely manner
- The team and especially the product owner are very satisfied with the product

### What went less well

- Lots of confusion about meeting times due to Friday holiday

### What we can do to fix it

- Last push, we should not lay back too much