

# The Justice Access Game: Crowd-Sourced Evaluation of Systems for Pro Se Litigants

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## Abstract

A variety of computational tools and systems have become available in recent years to assist pro se (self-represented) litigants in formulating claims and defenses in legal forums. However, there has been little exploration of techniques for evaluation of these systems to establish their relative effectiveness and identify specific strengths and weaknesses of each approach. This paper proposes the *Justice Access Game*, a crowd-sourced method for comparative evaluation of legal information systems. The Justice Access Game is a framework applicable to wide range of domains and systems.

## Keywords

Human-computer interface, evaluation, crowd-sourcing, pro se litigants

## 1. Introduction

Worldwide, a significant proportion of litigants appear *pro se*, i.e., without the assistance of an attorney, in courts and other decision forums [1] [11]. Pro se litigants are usually at a significant disadvantage in legal proceedings compared to parties represented by an attorney [5].

Development of approaches to assisting pro se litigants is an area of active research and exploration. One approach has been to replace conventional decision bodies, which are often extremely challenging for non-experts to understand and navigate, with alternative dispute resolution forums, such as ODR platforms, which are designed to be less disadvantageous to pro se litigants [3] [15]. In the context of conventional courts, online information and forms provided by courts and legal aid institutions are the most widely used information source, but most pro se litigants struggle to understand and effectively use these resources [4] [9].

Currently, the most common alternatives to simple online form and instruction resources automated legal assistant systems consist of some form of guided form-filling software, sometimes implemented as a chatbot [12], in computable logic [14], or combining these elements with predictive models [17]. In the United States and Canada, many such systems have been developed through a collective process involving communities of attorneys and other public-interest advocates [16] [7] [2]. Unfortunately, informal development processes of this type have not shown themselves to be conducive to rigorous system validation, verification, maintenance, or

evaluation [6]. As a result, it is difficult to measure the performance of alternative technical approaches in terms either of accuracy, usability, effectiveness, or success rate. Instead, relative performance is typically estimated anecdotally.

This paper describes the Justice Access Game (JAG), a general, domain-independent approach intended to address the challenges of evaluating legal assistant systems. The next section describes the design of the JAG, Section 3 sets forth the pragmatics of the game, the possible role of Large Language Models is discussed in Section 4, and a summary and proposal for future work is set forth in Section 5.

## 2. Game Structure

The Justice Access Game is method for comparative evaluation of systems to assist self-represented individuals. Players compete to identify a legal claim, identify all facts supporting the claim, and assert the claim via a legal filing. Points are awarded for achieving these goals and for incorporating all relevant but no irrelevant facts. Points are reduced based on errors and the duration or number of conversational turns required to achieve the goal. While individual participants compete for points, alternative systems are compared via the average number of points that competitors are able to achieve using those systems.

### 2.1. Procedure

In each round of a game, a player is provided a scenario involving multiple issues and individuals, is assigned a role and a goal, and is provided access to the system to be evaluated. The system can be a logic-based or guided-pathways legal information system, a website, a chatbot, or simply a baseline consisting of a stack of court forms.

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After being provided with a factual scenario and assigned a role and a goal, the player must accomplish the following tasks using the system:

1. Determine what legal action would achieve the goal, if successful
2. Identify all facts necessary for each element of the legal action
3. Draft a claim or petition setting forth the claim and all elements needed to support the claim

At the conclusion of each round, the player is assigned a score based on a weighted combination of the following factors:

1. Is the legal action correct, i.e., if the claim succeeded, would it achieve the player's goal?
2. Were the elements required for the action identified?
3. Were all the facts relevant to those elements identified?
4. Were there extraneous facts?
5. How many steps or how long did the process take?

Systems are ranked based on the average number of points that competitors are able to achieve using each system.

## 2.2. Example Game

Consider an example game. Suppose that the factual scenario were as follows:

### Facts

John and Mary started dating in September 2017, and in January 2018 they moved into an apartment that they rented from Bill. Baby Nell was born in 2019. Starting in 2021 the radiator in the apartment began failing during cold snaps. John and Mary complained about the cold, and without telling Mary, John stopped paying rent in February 2021 to protest the condition of the apartment. When John and Mary received an eviction notice in March, Mary became very angry at John. In the ensuing argument, a window in the apartment was broken and Nell received a cut on the forehead, which Mary blamed on John. When Bill came down to investigate the noise and saw the broken window, John threatened to hurt Bill unless he fixed the heat. Bill left the apartment and called the police, but John left before the arrival of the police, who listened to the arguments and left without taking any action. Mary refuses to let John in the apartment or see Nell. Bill insists that Mary leave the apartment immediately. John refuses to pay the rent until Bill fixes the radiator and insists that he has a right to live in the apartment with Mary and to spend time alone with his daughter.

Under this set of facts, a player could be assigned the role of Mary, John, or Bill. Each of these roles is associated with different set of possible legal goals, as shown in Table 1.

Role	Goal
Mary	Keep John out of their apartment
	Keep John from being alone with Nell.
John	Prevent eviction
	Return to apartment.
	Spend time alone with Nell.
Bill	Prevent eviction, if he is allowed to return to apartment
	Evict John and Nell.
	Keep John away from Bill

**Table 1**

Roles and goals in Justice Access Game 1.

For example, if a player were given a certain system, assigned the role of Mary, and given Mary's Goal 1 (keeping John out of the apartment), the player's performance using the system would be scored based on the the following:

- Identifying that Goal 1 could be achieved by a protection order
- Listing requirements for a protection order:
  - Domestic relation (cohabiting and having a child together)
  - Actual or threatened harm (injury to Nell)
- Completion of all fields of a petition for a protection order as Mary

A fact pattern, together with a single role and a single goal constitutes a *problem*. A fact pattern together with the sets of roles and goals arising from that fact pattern, constitutes a *problem set*. The example above illustrates that a single problem set may include problems in multiple areas of law.

## 2.3. Scoring

As described above, the scoring of each individual problem is based on correctness, completeness, accuracy, and duration. The Justice Access Game does not depend on any particular procedure for performing this scoring. The most informative scoring would be individual ratings by experts in the particular areas of law involved in the problem set, e.g., legal-aid attorneys or law professors. A more practical alternative would be a heuristic match to model solutions, e.g., ROUGE scores [8] or similarity in semantic-embedding space [10] between each solution element and the corresponding element of the model solution.

### 3. Pragmatics

#### 3.1. Game Requirements and Preparation

Applying the Justice Access Game requires that the systems to be compared share a common legal domain. For example, a chatbot could be compared with a guided-pathway system only if both were designed to address a common legal problem.

A more challenging pragmatic issue is that a model solution is needed for each problem. Justice Access Game problems are intended to be representative of the challenges routinely faced by pro se litigators, so the solutions should be straightforward for legal-aid attorneys or law professors. However, preparing all the solutions for a entire problem set could require an investment of many hours.

#### 3.2. Game Participants

Participation in the Justice Access Game is intended to approximate the experience of actual pro se litigants, who typically have little or no experience with judicial proceedings. Appropriate participants could therefore include anyone with limited legal experience, e.g., Mechanical Turk crowd-workers, participants in the NSF Timesharing Experiment,<sup>1</sup> or college students. By contrast, law students would probably not be appropriate. For the same reason, players should not be given multiple problems involving the same area of law.

#### 3.3. Baselines

The key objective of the Justice Access Game is to empirically establish the effectiveness of alternative paradigms for assisting pro se litigants. Accordingly, it is appropriate to start with the most widely used baselines. The first would consist of court forms plus the Internet, the resources traditionally available to pro se litigants in a typical court. A second proposed baseline would consist of the online form technologies currently promoted by Legal Services Corporation, e.g., Court Forms Online<sup>2</sup> or Maryland Court Help.<sup>3</sup>

## 4. Large Language Models

The capabilities of Large Language Models (LLMs), such as ChatGPT [13] have recently advanced dramatically. When JAG problems are posed to these systems, they are capable of providing advice that is mostly useful and accurate, but occasionally disastrously incorrect. In an

example session, when ChatGPT (3.5) was given the example fact pattern from Subsection 2.2 above and was asked what advice it would give if it were a legal aid attorney, it provided the following response:

Mary can take legal action to keep John out of the apartment by obtaining a protective order or a restraining order.

A protective order is a court order that prohibits an abuser from having contact with the victim and may require the abuser to stay away from the victim's home or workplace. In Virginia, a victim of domestic violence, such as Mary, can apply for a protective order from the court.

To obtain a protective order, Mary would need to file a petition with the circuit court in the county where she lives or where the abuse occurred. She would need to provide detailed information about the abuse, including dates and specific incidents, and explain why she needs protection. She should also provide any evidence she has, such as medical records, photographs, or witness statements, to support her allegations.

If the court finds that Mary is in danger of further abuse, it may grant a protective order that prohibits John from having any contact with her or coming within a certain distance of her and her daughter. Violating a protective order is a criminal offense and can result in John being arrested.

Alternatively, Mary can also seek a restraining order, which is a court order that prohibits someone from coming near or contacting the protected person. In Virginia, a restraining order can be obtained through the Juvenile and Domestic Relations District Court.

Mary should consider consulting with a local attorney who can help her assess her options and determine the best course of action for keeping John out of the apartment and protecting herself and her daughter.

When asked to draft a sample protection order, the result was the following:

As an AI language model, I'm not authorized to provide a completed legal document as it requires legal expertise and

<sup>1</sup><https://www.tessexperiments.org/>

<sup>2</sup><https://courtformsonline.org/>

<sup>3</sup><https://perma.cc/F654-KMNE>

access to specific information about the case. However, I can provide an example of the information that Mary may include in a Virginia petition for a restraining order based on the facts provided:

[Header information: Virginia Circuit Court, [Name of County], Civil Case No. [insert case number]]

PETITION FOR A PROTECTIVE ORDER

My name is [Mary], and I reside at [address]. The person I am seeking protection from is [John], and his last known address is [address]. John and I were in a relationship from September 2017 to March 2021. We have a daughter together, named [Nell], who was born in 2019. In February 2021, John stopped paying rent on our apartment to protest the condition of the apartment. Despite my requests to pay the rent, John refused to do so, resulting in us receiving an eviction notice in March. On [date], John and I had an argument about the eviction notice, during which a window in the apartment was broken, and Nell received a cut on her forehead. I believe that John broke the window and caused the injury to our daughter. When our landlord, Bill, came down to investigate the noise and saw the broken window, John threatened to hurt Bill unless he fixed the heat. Bill left the apartment and called the police, but John left before their arrival. I am in immediate and present danger of family abuse by John, and I am seeking a protective order to ensure my safety and the safety of my daughter. I request that the court grant a protective order that prohibits John from having any contact with me or my daughter and from coming within a certain distance of us. [Signature of petitioner, Mary]

Again, this is just an example of the type of information that Mary may include in a petition for a restraining order in Virginia. It is important to note that legal documents such as this require a high degree of legal expertise and accuracy, and it is recommended that Mary consult with a local attorney for assistance in drafting and filing the petition.

It seems almost certain that we stand on the threshold of an era in which pro se litigants will increasingly turn to LLMs for legal advice, notwithstanding any disclaimers

such as those appearing above, against providing legal advice. The Justice Access Game may provide one mechanism for assessing the quality and usefulness of this advice to pro se litigants.

## 5. Summary

This paper has described a new crowd-sourced method for comparative evaluation of legal information systems, the *Justice Access Game*. The Justice Access Game provides a framework applicable to wide range of domains and systems and can provide a realistic assessment of the capabilities of systems to assist pro se systems in a realistic setting. This paper has briefly set forth the details of the Justice Access Game and provided two example games. It is hoped that this work will be of value in understanding the capabilities of emerging technologies, including not just extensively engineered solutions such as the JusticeBot [17] but also rapidly changing ad hoc capabilities typified by ChatGPT [13].

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## A. Justice Access Game Example 2

### Facts

Tracy let an ex-boyfriend, Mark, borrow her car after many assurances that it would be a quick trip “down the block”. An hour later, Tracy received a call from Mark that he was pulled over by the police under a suspended driver’s license. The police advised Mark that he was traveling through a known drug corridor as the reason for the stop. Mark was not aware that his license was suspended prior to borrowing the car. Mark called the DMV and was informed that his license was suspended due to the lack of insurance coverage on his vehicle. Mark had switched insurance providers recently, and believed this is the reason for the error. Mark told Tracy that the vehicle was impounded by the police department and was told that it was a 30-day impoundment and would cost \$300 for release. Tracy was stunned because she only had one vehicle and not having one will substantially affect her ability to work as an Uber driver. Tracy had recently moved into her current apartment and after incurring expenses for new furniture, a security deposit, and other costs associated with moving, a \$300 loss would have a significant impact on her family’s finances. James, Tracy’s husband (who thinks they overpaid on moving expenses and furniture) became angry after hearing about the additional \$300 expense for the vehicle’s return. After the argument, James asked for a divorce, took their three-year-old son, and left the apartment.

<b>Role</b>	<b>Goal</b>	<b>Action</b>	<b>Elements</b>
Tracy	Retrieve the vehicle before the 30-day deadline	Submit a Form DC-499 Motion and Order for Release of Vehicle to the General District Court	Prove you did not know the offender's license was suspended. Prove that the immediate family only has one vehicle and will suffer hardship if not returned
Tracy	Avoid paying for the vehicle's return or be compensated for doing so	If DC-499 is too lengthy a process, pay for the vehicle's return, and sue Mark for the losses. This can be done in small claims court by filing a DC-402.	Demonstrate that Mark is the cause of Tracy's injury (the costs incurred by the vehicle's impoundment).
James	Divorce Tracy	If no fault, submit a VS-4 Report of Divorce or Annulment	Having been separated for at least a year
James	Obtain Joint-Legal Custody of Son	Either the required forms in J&DR Court or file complaint from scratch to be included with the divorce in Circuit Court	Plead complaint in alignment with the "information considered in custody proceedings."
Mark	Get license reins	Provide the DMV with a Certification of Insurance Pay the DMC reinstatement fees	Provide the DMC with a Certification of Insurance Pay the DMC reinstatement fees
Mark	Avoid costly court proceeding	Submit a Petition for Proceeding in Civil Case Without Payment of Fees or Costs to the General District Court	Provide net income, assets, and expenses to the court.

**Table 3**  
Roles and goals in Justice Access Game Problem Set 2.