

# Peter A. Allard School of Law / UBC Emerging Media Lab Judicial Interrogatory Simulator

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## BACKGROUND

The Judicial Interrogatory Simulator (JIS) is a web-based courtroom simulation designed to equip first-year law students for the moot court experience. A moot court session involves two grounds of appeal, with two teams of appellants and respondents presenting their arguments to a panel of judges.

The platform is developed to alleviate stress, and particularly to support those who find their moot court submissions to be one of the most stressful experience in their entire legal education.



Moot Court in Session

## PROJECT DETAILS

JIS offers three versions aimed at enhancing legal preparation, problem-solving, and oral advocacy skills: Classic, Intelli-Judge, and Virtual Reality (VR).

The Classic version focuses on improving speech articulation and time management. Intelli-Judge offers real-time feedback and simulates judge-like questions for students to refine their argument delivery and response skills. The VR version provides an immersive environment to facilitate a deeper understanding of courtroom dynamics. Complemented by Intelli-Judge, students benefit from a comprehensive practice scheme.

## PROCESS

JIS' core application (Classic & Intelli-judge) uses React-Three-Fiber, HTML, CSS, and Typescript, with the web-app hosted on AWS. The VR interface and functionality was implemented using Unreal Engine 5.3 blueprints.

The judges for Classic & Intelli-Judge version are sourced from DeepMotion and animated using Mixamo, Plask.ai, and Rokoko AI motion capture. Blender and Maya were used for additional 3D assets.

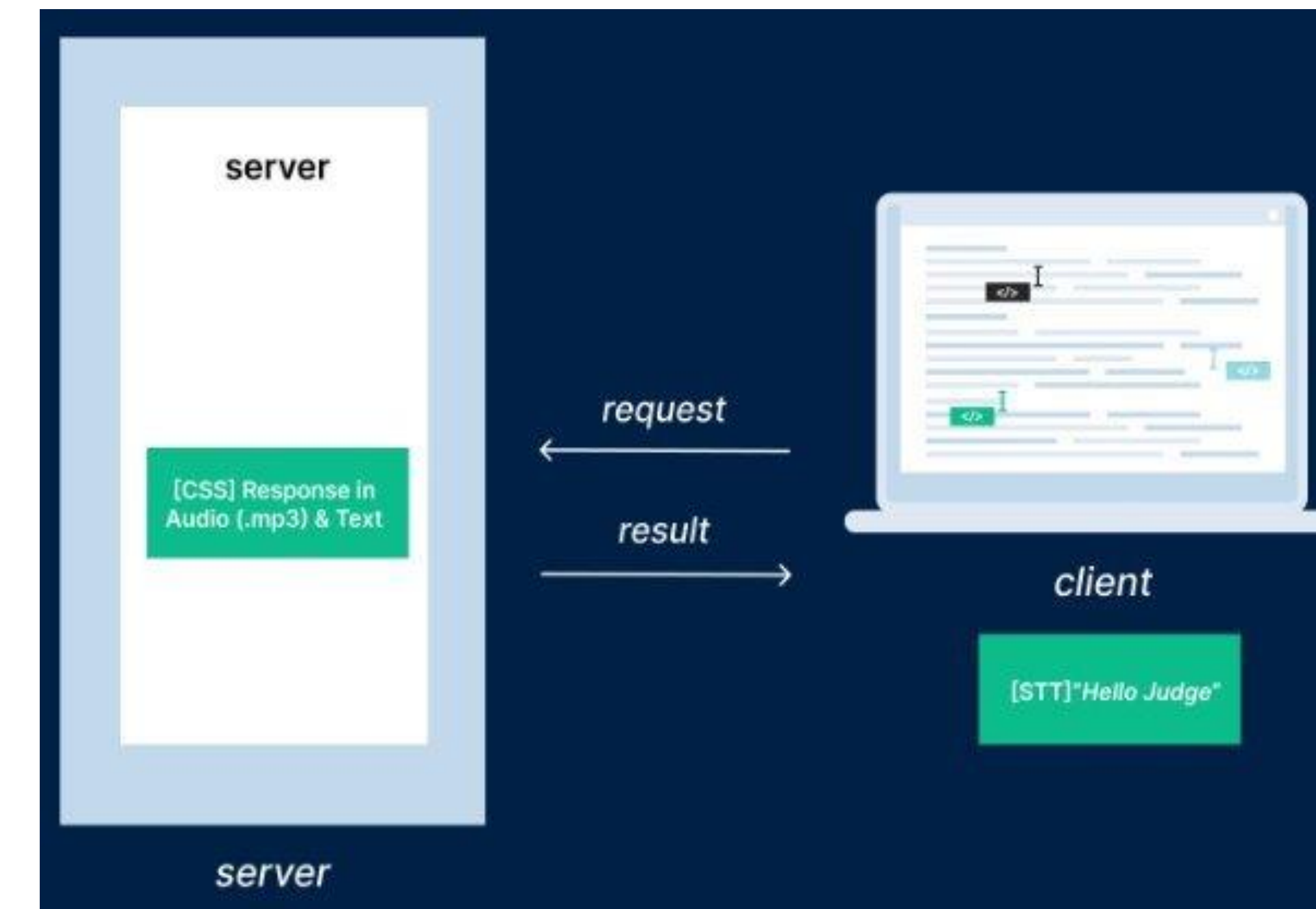
## INTELLI-JUDGE

Intelli-Judge is an AI language tool that allows students to engage in dynamic dialogues resembling actual judge-student exchange in a normal moot proceeding.

The server implementation includes a tailored speech-to-text functionality to enhance user experience within the virtual courtroom. Recognizing limitations in the current response time, a custom solution was developed to address challenges associated with abstracted recording processes and limited text outputs. Complete text transcripts are sent to the server to quickly prompt corresponding audio segments that are returned to the user.

This streamlined communication process optimizes performance while maintaining seamless interaction within the environment.

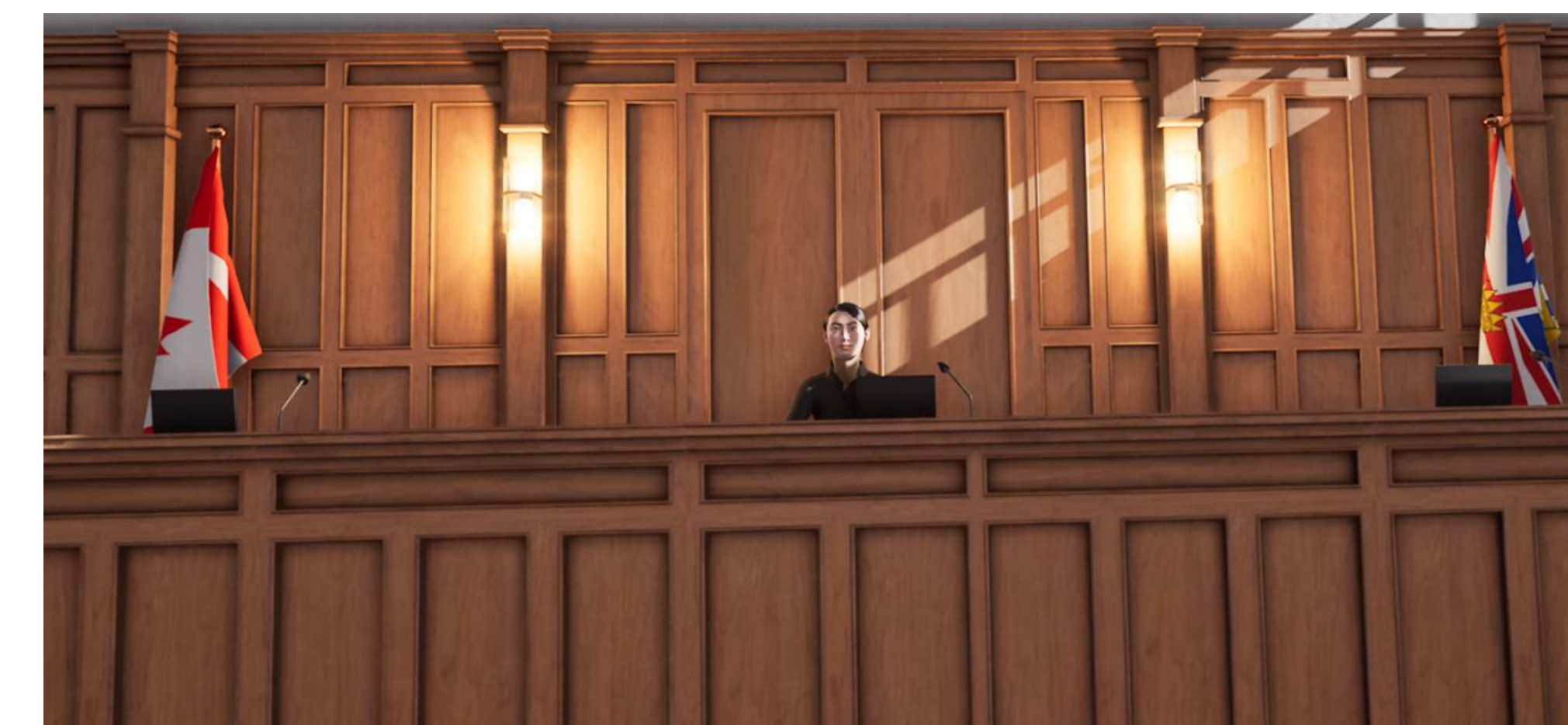
In this version, students not only have the option to use the application any time, but also pause the submission to collect their thoughts during a practice session.



Visual Implementation of Server

## VIRTUAL REALITY

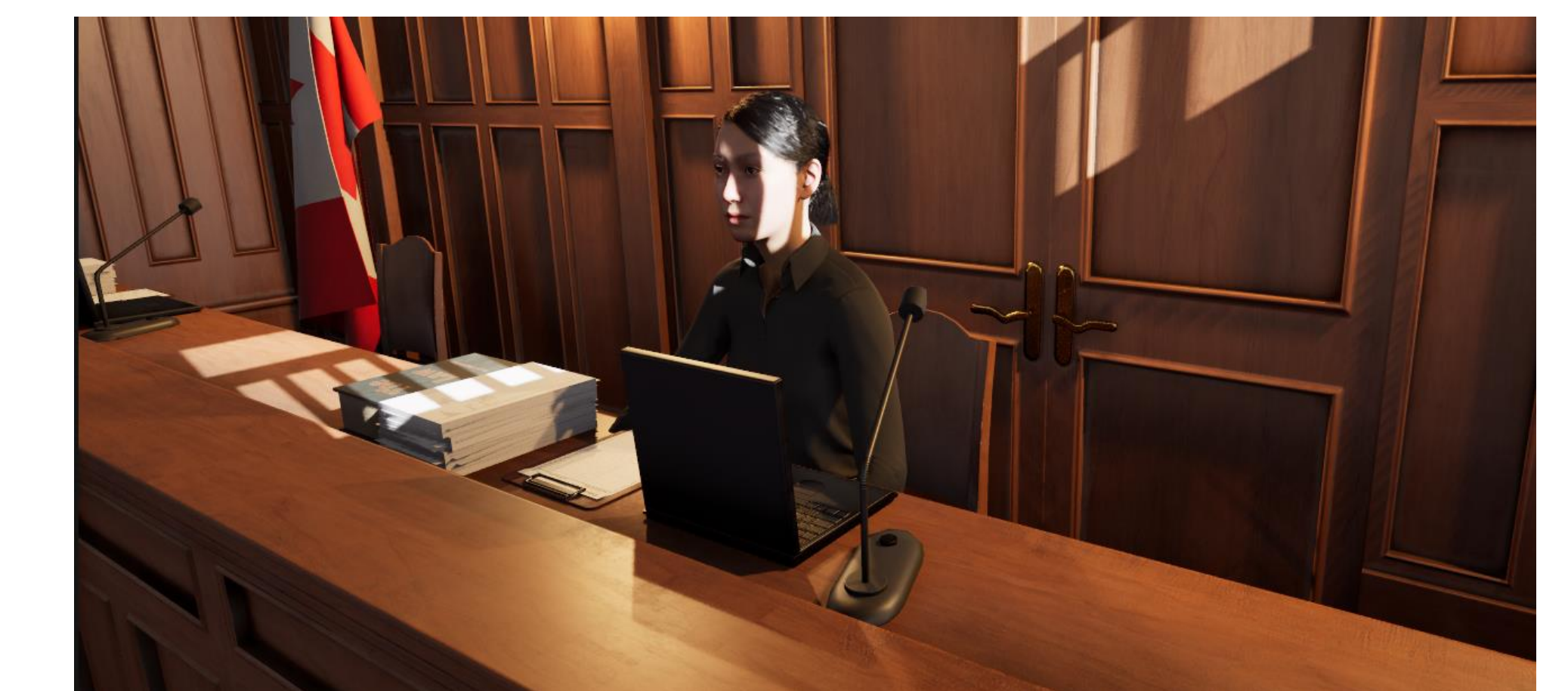
Using Unreal Engine and MetaHuman technology, we developed a virtual courtroom aimed at providing an immersive learning experience for students. The MetaHuman judge model utilizes body animation from Mixamo, and facial animation from UE facial livesync to enhance authenticity of interactions.



Beyond immersion, the system offers practical benefits. The virtual recreation of the courtroom gives students a private space to practice their submissions and experience first-hand the challenges of arguing their positions within a strict time limit. This is an important resource to support inclusive learning within the legal community, particularly for individuals grappling with heightened anxiety and initial discomfort with public speaking.

## NEXT STEPS

- Enhancements to Intelli-Judge:
  - Integration of emote-response system
  - Augmentation of the AI's legal database
- Improvements to the VR simulated environment:
  - Implementation of user perspective montage in the courtroom
  - Increasing the repertoire of facial and bodily movement within the MetaHuman interface for enhanced realism and versatility



## ACKNOWLEDGEMENTS

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about the  
project:

