



Thesis Defense

Computer Science Master's Program

“Political Inconsistency Detection Across Legislative Speech and Public Communications”

By **Scott Pramuk**

Abstract:

Political actors communicate about legislation across multiple contexts, including committee hearings, recorded votes, and public-facing press releases. Differences between these forms of communication can provide useful signals for journalists and researchers seeking to understand how legislators present policy positions to different audiences.

This thesis extends the Digital Democracy Project, a legislative transparency initiative that provides access to California state legislative hearing transcripts, voting records, and related legislative data. Specifically, this work incorporates publicly accessible, legislator-authored news releases into the Digital Democracy Database and develops a pipeline for analyzing legislative communication across multiple sources. The system collects news releases from California state legislators, links them to referenced bills, and aligns them with committee hearing speech and voting records. Using natural language processing and large language models, the system estimates legislators' stances toward specific bills and identifies potential inconsistencies between public communications and legislative actions.

Because no labeled dataset exists for this task, evaluation was conducted on the ParlVote parliamentary voting dataset using voting outcomes as a proxy for political stance. Multiple approaches were evaluated, including sentiment analysis, natural language inference, and large language model-based stance detection. Results indicate that stance-based methods outperform traditional sentiment analysis and natural language inference for political communication tasks. The resulting signals collected through the pipeline are integrated into Digital Democracy journalist-facing tools, helping surface potential discrepancies between public messaging and legislative behavior.

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Time: 2:00 PM – 4:00 PM

Location: 14-232b

Committee: Dr. Alex Dekhtyar, Dr. Foaad Khosmood, Thomas Gerrity

