

Part A

In proportional representation voting methods, citizens may feel inclined to support national parties rather than individual candidates from their district. However, under the single-member district system, known as first-preference vote or first-to-finish voting, it is strategically beneficial for voters to back their preferred local candidate. This choice ensures that their ballot positively impacts the outcome, unlike casting votes for distant party figures who have little influence over their community's concerns. For example, a voter in rural Wisconsin might select a locally active farmer over a senatorial candidate from California because the former would be more attentive to issues like agricultural subsidies or dairy price supports, matters vital to the voter's livelihood and community. Thus, by supporting a nearby candidate whose priorities align with their own, residents can advocate effectively for their interests at the governmental level while still supporting their preferred political party on a broader scale. Voting for a well-qualified neighboring politician also helps maintain a sense of connection between elected officials and their constituents, fostering an atmosphere where representatives are held accountable, responsiveness improves, and governance becomes truly representative of the people they serve.

Part B

As Mr.Zarrab's trial neared and he was transferred from a Manhattan jail to a secret location, Turkish media speculated wildly about his cooperation with prosecution. Official inquiries were made to the U.S. regarding his whereabouts, and cabinet ministers emerged from their shell to engage foreign press and downplay the significance of any potential testimony from Mr Zarrabs. "Why should I be concerned?" Foreign Minister Cavusoglu said, in response to questions about possible disclosures from MrZarrabs testimony. "I didnt drink untreated milk,so why should I worry about It?" The extent of denials by the Turkish government is an obvious sign of their concern about the potential impact of the Zarab case on the economy. Said AtillaYesilada of the New York-based management consultants GlobalSourcePartners, "There is a huge concern." President Erdogans repeated inquiries to American officials about the case followed a September phone call between the two leaders, which came after prosecutors announced a new, broader indictments with nine defendants. Even absent the added strain of the trial, Turkey-U.S relations have been strained"

Part C

Experimental Plan (15 Pts)

What experimental setting did you choose? How did you train the models? What methods did you use to ensure the results were robust, considering the limited computational resources?

What models/approaches did you use?

How did you ensure that the approaches differed from one another?

Compute the number of parameters and report the architectural differences.

How to find the best params for your algos and baselines?

Grid search or better techniques.

Prepare the table for ablation with different hyperparameters.

What metric did you choose? And why?

What additional metrics did you try with, other than the existing metrics?

What level of system effort was required? Please paint a scenario for the final demo that you will present during the viva.

Part D

Yeah! Those robots doing backflips are insane, right? I mean, I've seen some crazy stuff in my time, but that's on a whole other level!

So, robotics research is actually making some huge strides right now. We're seeing a lot of advancements in areas like artificial intelligence, machine learning, and computer vision, which are all crucial for developing robots that can do crazy stuff like backflips. One of the biggest areas of focus is on creating robots that can learn and adapt in real-time, kind of like how humans do. This is called "embodiment," and it's all about teaching robots to understand their physical surroundings and react accordingly. It's pretty cool stuff! As for when we can expect to see robots like these in everyday life, it's hard to say exactly. But we're already seeing robots being used in things like warehousing, manufacturing, and even healthcare. And with the rise of autonomous vehicles, I think we'll start to see more robots integrated into our daily lives within the next decade or so. But here's the thing: those backflipping robots? They're still pretty specialized and are mostly being developed for research purposes. It'll probably be a while before we see robots like that doing backflips in our living rooms or anything. Although, can you imagine having a robot butler that can do backflips to impress your friends? That'd be pretty cool, right?