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LANGUAGE MODELS IN SPACE DIPLOMACY EDUCATION: A CASE STUDY OF A MULTILINGUAL LLM PROMPT LIBRARY

Abstract

Negotiation, problem solving, crisis management, policy analysis, and communication skills are vital to future space diplomats. A curriculum of a course on space diplomacy has to include a practical component to develop and refine those competences. Thanks to recent advancements in Artificial Intelligence and its capabilities in text processing and generation, we have developed a specialized LLM prompting resource for the *Space Diplomacy* course, a core compulsory component of the MA programme in *External Politics and Diplomacy*, National Aviation University of Ukraine.

This digital tool comprises three components. The first part, **"Fundamentals of Prompting"**, is a guided self-study manual, teaching students the basics of prompting and prompt engineering, including 4 basic algorithms: a general all-purpose prompt, a Chain-of-Thoughts algorithm, a Few-Shot prompt, and an algorithm for automatic prompt drafting. The second one, **"Prompt Library"**, includes detailed 8 space-specific algorithms in three thematic domains: (i) prompts for generating and solving space diplomacy and space law cases; (ii) role-based prompts, where the student and/or the model are taking on a role in a simulation: a simulator of diplomatic negotiations, a press-conference simulator, and a crisis management exercise; (iii) text processing: a prompt for space policy analysis, a prompt to prepare an international or diplomatic document, and a public speech writing assistant. The third component, **"Swipe File"**, contains a number of shorter, simpler prompts to showcase the power of language models.

The goal of the library is to teach students to use large language models to develop skills foreseen in their curriculum. To achieve that, the resource is accompanied by a prerecorded 1.5-hour asynchronous workshop, where the students are encouraged to try prompts first-hand. Detailed algorithms are available in two languages, Ukrainian and English, and include a basic structure, an example on how to use them for the *Space Diplomacy* course, and useful further prompts to refine outputs. The library is versatile and can be applied with slight modifications to any International Relations course: this year, it was also used for teaching two courses on international airspace.

The library has proven to be a useful resource for training practical skills of future (air)space diplomats. We are going to explain engineering and didactic decisions made in building the library, share the feedback we have received from students, the improvements made to the resource, as well as challenges and advantages of using large language models in space diplomacy education.