California State University San Bernardino
School of Computer Science and Engineering

CSE 482 Senior Project Presentation

Date

March 30, 2022

Time

2:00 pm

Location

Zoom Meeting

Title

Spatial Bargaining Application

Student

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Advisor

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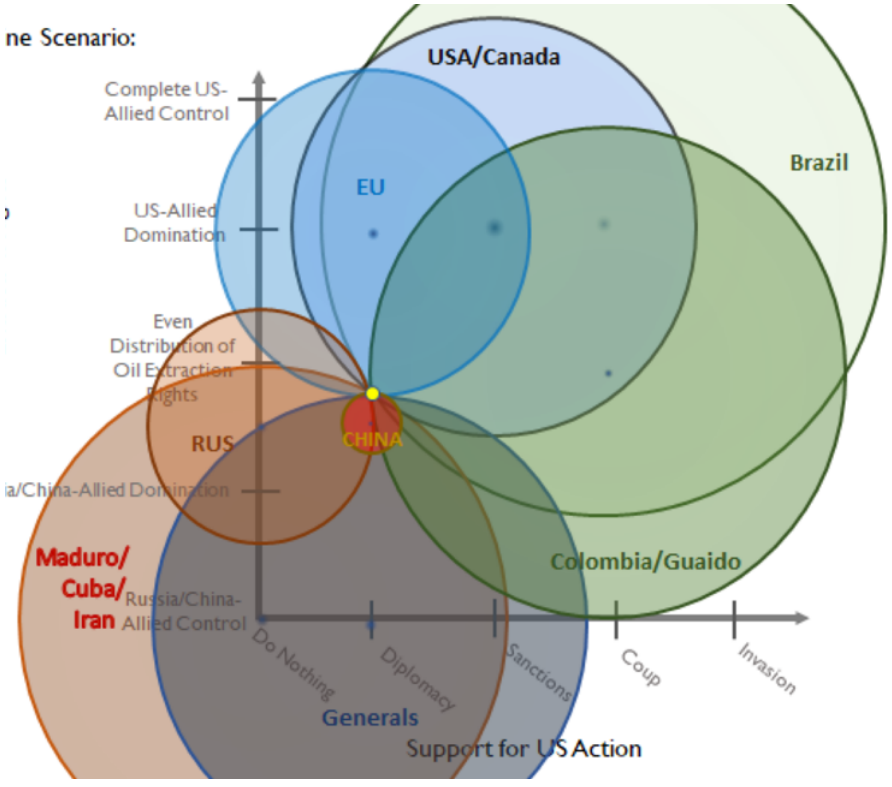
Abstract

Problem Statement

Spacial bargaining is a risk mitigation and strategic decision making tool utilized in specialized industries for mergers and acquisitions, investment decisions, and political lobbying. By charting the preferences of key stake holders on a Euclidan plane informed

decision makers can pose an agreement most optimally satisfying all the key stakeholders involved. This process is useful especially for investment bankers, political analysts, and consultants who need to make decisions in their designated fields. For example, in the following graph, the United States national security council is pondering the efficacy of action against Venezuela's dictator, Nicolas Maduro. On the X axis we have 5 possible policy positions of increasing intensity, with "doing nothing about the dictator" as the least extreme, and a full scale invasion at the highest extreme. On the y axis, we see 5 potential positions on the allocation of Venezuela's Oil, with Russian/Chinese/Venezuelan control of the oil on one end of the spectrum, to full US and Allied control of the oil on the other end of the spectrum. The twelve most important stakeholders each have positions on the x and y axis based on expert assessment of the situation analyzed in this model which was made on powerpoint in May of 2020.



The problem is that there currently exists no accessible software for charting these measurements or for calculating the result. Currently, all spatial bargaining analysis must be done by hand, or with expensive proprietary packages.

Goal

The goal of this project is to release an easy to use web application for performing spacial bargaining analysis which is affordable to corporate and student interests alike. Customers would be able to save time and money while still achieving the robust results desired in their fields.