Private: Decoding Democracy: Exploring AI-Driven Insights for Participatory Democracy

Project Description:

This project invites you to embark on a journey where artificial intelligence intersects with participatory democracy. Delve into the intricacies of public consultation responses and employ advanced deep learning techniques to unveil insights within citizens' expressions.

Key Objectives:

1. **Create a New Database Framework:**
   - Develop a robust Entity-Relationship (ER) model or an ontology to capture crucial information about consultations and public responses.
   - Establish a structured foundation to efficiently manage and analyze diverse public input.
   - Store responses from three distinct consultations for comprehensive insight.
2. **Apply AI/NLP – Deep Learning Anylisis :**
   - Master AI methodologies like sentiment analysis and topic modeling to extract valuable insights from citizens' input.
   - Build upon existing research using trained deep learning models for enhanced comprehension.
   - Explore alternative deep learning models for potential improvement.
3. **Craft a User-Friendly Web Tool (dashboard):**
   - Design an intuitive web dashboard serving as the front-end for AI analysis, automatically delivering insights from selected consultations.

Previous work done:

- A foundational analysis of a real-world consultation has already been conducted, yielding fresh insights.

Future Steps (in this project):

- Enhance your analytical prowess to enrich the AI-driven tool's ability to decipher citizen sentiment.
- Evaluate your project with citizen feedback from actual cases, including the 2018 and 2023 Electoral Reform Consultations.

Skills that you will learn:

1. **Database/ Ontology Design**: Learn to create structured databases for efficient data storage.
2. **Data Modeling**: Understand how to logically represent real-world relationships.
3. **Deep Learning AI (NLP) Analysis**: Analyze text data to uncover sentiment patterns and categorize text into meaningful topics.
4. **Web-Tool Development**: Create user-friendly web interfaces and integrate them with backend services.

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Prerequisite Modules

Data Analysis,Machine Learning Fundamentals,Python,Web Development Basics

Supervisors

Rosa Filgueira

Posted on 21 August 2023 by rf208
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