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| Modular Courses | System Functionalities / Techniqe Applied |
| Machine Reasoning (MR) | * **Knowledge Elicitation and Extraction**:  Web crawling from websites   Manual extraction from Israeli MOH dataset   * **Business rule and Business process**   Restrict rules to allow the vaccinated user to process the business rules   * **Constraint Satisfaction**   Setup threshold for the similarity of knowledge chatbot response and auto-switch to the chatbot of content based filtering   * **Rule Based System**:   Decision tree to derive rules from COVID-19 symptoms and user profile   * **Knowledge Discovery & Reasoning**:   Knowledge Chatbot developed by Chatterbot based on FAQ worksheet   * **Knowledge Representation**:  Decision tree diagram for COVID-19 symptoms   Classification report and confusion matrix table for the training results  Data representation in django SQLite database |
| Reasoning System (RS) | * **Knowledge Discovery & Transparency**:   Decision trees and Decision rule learning, including One-Hot Encoding, on predicting covid based on symptoms  Similarity-based Reasoning, including Similarity & Distance Measures by Cosine Similarity, on chatbot response from covid knowledge base |
| Cognitive System (CGS) | * **Cognitive System**:   Chatbot developed by Nature Language Processing, tf-idf indexing and Similarity Measures |