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About Me:

I am currently pursuing Bachelor of Science in Data Science and Applications, and I've reached the Diploma level of my studies. Throughout this journey, I've consistently honed my technical skills and expanded my knowledge base. A significant milestone in this process has been my work on an Application Development Project, which has been instrumental in sharpening my coding abilities and deepening my understanding of key technologies. I've gained proficiency in HTML for web development, Python for backend logic, Flask for building web applications, and Jinja for templating.

Description:

This project is a web application built using the Flask framework. It includes user registration and role-based redirection functionality with Dashboard for each role. CRUD functionalities are implemented for Campaigns and Ad requests, with role based access to different entities and an option to update profile, campaigns and ad requests. The admin can control all the entities and see the stats of the app.

Technologies Used:

Python: Backend development.
HTML: To develop the Templates for Web Pages.
CSS: To style the Web pages.
Flask: Web framework for routing, rendering templates, and handling requests.
Flask-SQLAlchemy: Simplified database interaction with ORM.
Jinja2: Dynamically rendered HTML templates with Python logic. **SQLite**:
Easy-to-use SQL database engine for data storage.

Database Schema Design:

1. **User Table**:
   id as primary key, a unique and required **username** and **email**, with a hashed **password**, **role** for their user rights and their activity **status**, using SQLAlchemy in python. The admin role is only added manually when the first request is sent and not through sign up page for security reasons.

2. **Influencer Table**:
   id as the primary key, **user_id** as foreign key to the user table, with **name**, **category**, **niche**, **reach** and **platform** fields. Also a **flagged** field is there to identify suspicious influencers all using SQLAlchemy in python.

3. **Sponsor Table**:
   id as the primary key, **user_id** as foreign key to the user table, with **company_name**, **industry** and **budget** fields along with **flagged** field to identify suspicious sponsors using SQLAlchemy in python.

4. **Campaign Table**:
   id as primary key, **name**, **description, start** and **end** dates, **budget**, **visibility** and **goals** along with **sponsor_id** as forign key using SQLAlchemy in python.

5. **AdRequest Table**:
   id as primary key, **name**, **messages**, **requirements**,, **pament** amount and **status** as fields for **adrequest**. It also has **sponsor_id**, **campaign_id** and **influencer_id** as foreign key to sponsor table, campaign table and influencer table using SQLAlchemy in python.

Architecture and Features:

The application follows the MVC structure: The model's app.py can be found in the root directory. The controller can be found inside the application folder under the root directory as well as the model can be found as models.py. The view of the application is created using HTML and CSS. Controller is created using Python and Flask. The model is created using Sqlite.

Video Link: VIDEO DEMO