Software Projekt
Computer Science

Topics

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Online Tutoring Platform

Description:
Development of a platform that brings students together with tutors. Features could include video tutorials, real-time chat, booking systems and progress tracking.

Key Features (MVP):

- User Registration and Profiles:

  Allow students and tutors to create and manage their profiles.

- Tutor Search and Booking:

  Implement a search function to find tutors based on subjects, availability, and ratings, along with a booking system.

- Video Tutoring:

  Enable live video sessions using WebRTC.

- Real-time Chat:

  Integrate a chat system for communication between students and tutors.

- Session Management and Progress Tracking:

  Track completed sessions and provide feedback/reports.

Social Media Analysis Tool

Description:
A tool that analyzes social media platforms to identify trends. It could provide data visualization, sentiment analysis and a reporting function.

Key Features (MVP):
- Basic data collection (via API or web scraping):
  Collect relevant data (e.g. posts, comments, likes, shares)
- Sentiment analysis using pre-trained models:
  Employ NLP techniques to analyze sentiment in posts (e.g. positive, negative, neutral).
  Use a pre-trained model such as BERT.
- Simple trend analysis (e.g., hashtag frequency):
  - Extract topics from the collected texts and categorize the discussions by applying algorithms such as LDA (Latent Dirichlet Allocation) or k-Means Clustering.
  - Analyze hashtag usage to identify trends and emerging topics.
  - Develop a feature that tracks trends over time and visualizes how certain topics or sentiments evolve.
- Basic dashboard for visualization:
  Visualize the results of the analyses

Virtual City Guide

Description:
Developing a virtual city guide that allows tourists to take a picture of a building with their smartphone, automatically recognize the building, and then provide historical details.

Key Features (MVP):

- Image Recognition:

  The app should identify buildings from photos taken by users.

- Historical Information Retrieval:

  After identifying the building, the app provides detailed historical information.

- Interactive Map:

  Show nearby points of interest with additional information.

- User Interface:

  Design a simple, intuitive interface that is easy for tourists to use.

- Multilingual Support:

  Offer information in multiple languages to cater to international tourists.