

BIL-316 – DATABASE MANAGEMENT SYSTEMS II, 2025-2026 Spring

Project Proposal

Attention: Submit one form per group, listing all members of the group below.

Group Members (ID and Name):

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Project Title: Full-Stack SaaS YT-Insight

Project Summary: This project is a full-stack web application originally taken from a freelance marketplace and adapted as an educational SaaS project. The main goal of the platform is to practice real-world backend and frontend development, API integration, authentication, and working with external services such as the YouTube API.

All Technologies You will Use: This project uses PostgreSQL as the primary database for storing application data. The backend is implemented using Django REST Framework in Python, providing RESTful APIs and handling business logic. Authentication and authorization are managed using JWT tokens. The backend integrates external services such as the YouTube Data API and AI-based agents for data analysis and automation. The frontend is built with Vue.js using plain HTML, CSS, and JavaScript to focus on API interaction and core functionality. GitHub is used for version control, and Jira is used for project management and sprint tracking.

Scope of the Project and Work Plan: The project will include user account management with registration and login using JWT authentication. Users will be able to submit a YouTube channel URL, which will be analyzed by the system using the YouTube Data API and AI-based analysis services. The application will provide channel-level insights based on video metadata and user comments. The backend will handle data processing, authentication, and external API integration using Django REST Framework. The frontend will allow users to view analysis results, basic channel information, and history of previous analyses. The database schema will store users, analyzed channels, videos, comments metadata, and analysis results. Development will follow a sprint-based workflow with weekly milestones, and each sprint will be documented in the project repository.