

# Tech Stack

**Mindstack** is a web-based learning application designed to make studying more effective and engaging. It provides students with interactive tools such as a Flashcard Builder, Custom Quiz Creation, Progress Tracking, a Student Dashboard, and a News Feed. Selecting the right technologies ensures a smooth, secure, and scalable system that enhances the overall learning experience.

## Frontend Technologies



**HTML:** Defines the structure of web pages.



**CSS/SCSS:** Styles and enhances the visual layout of the application.



**Typescript/Javascript:** Provides interactivity and dynamic behavior.



**Angular:** A modern framework for building responsive and modular web applications.



**Bootstrap:** Used for responsive design and pre-styled UI components.

## Backend Technologies



**Django:** Handles server-side logic, API creation, and secure communication between frontend and database.



**Django REST Framework:** Used to build RESTful APIs that connect the Angular frontend with the Django backend.



**MySQL:** Serves as the primary relational database for storing user data, flashcards, quizzes, and progress tracking.

## Development Tools and Environment



**Visual Studio Code:** The main code editor for writing and debugging the project.



**XAMPP:** Initially used for local MySQL database setup during early development.



**GitHub:** Used for version control and team collaboration during development.

## Deployment and Hosting



**Hostinger:** A web hosting platform that supports Python and MySQL-based web applications. Provides stable and cost-effective hosting for Django-based web applications.