



GOATCAPELLA



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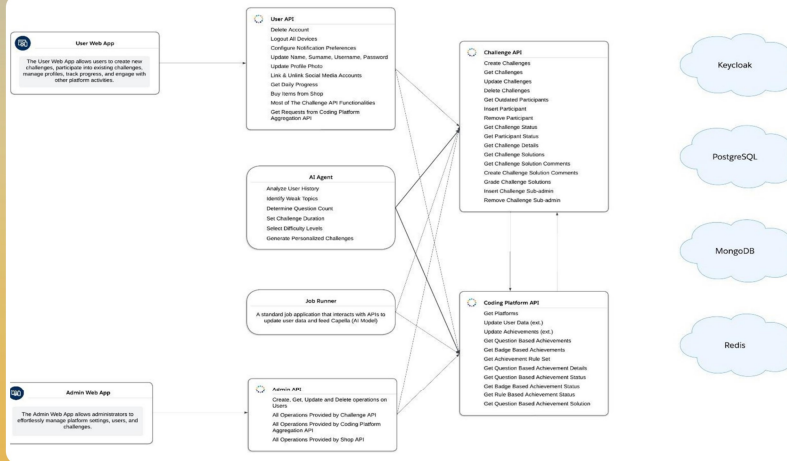


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ABSTRACT

GoatCapella is an ASP.NET based platform that adds a competitive and social dimension to existing coding websites such as LeetCode, HackerRank, and Codewars. While these platforms offer extensive problem sets, they often lack mechanisms that foster long term engagement and accountability. GoatCapella fills this gap by allowing users to participate in structured challenges, compete on leaderboards, and stay motivated through gamified rewards. By combining curated problems from these platforms with AI generated question suggestions tailored to individual skill levels, GoatCapella supports consistent practice and helps users build strong algorithmic problem solving abilities within a collaborative environment.

GOATCAPELLA'S ARCHITECTURE



SOLUTION

To enhance the learning experience and promote better problem solving habits, GoatCapella leverages the public APIs of major coding platforms to retrieve question metadata, user activity, and submitted solutions. Users can initiate custom challenges by either selecting problems themselves or using AI generated recommendations based on their performance history. The platform offers flexible configuration options such as visibility settings, ranking update frequency, and challenge privacy. Once challenges are underway, users can track their own progress, engage with others by commenting on solutions, and earn points to climb the global leaderboard. This ecosystem encourages accountability, social learning, and steady skill improvement through an adaptive and user driven approach.

RESULT & CONCLUSION

By the end of the development cycle, GoatCapella was successfully integrated with the LeetCode platform, enabling challenge participation and progress tracking. The platform demonstrates a working prototype of a unified challenge ecosystem that transforms individual problem solving into a collaborative, gamified experience. Designed with a modular and scalable architecture, GoatCapella ensures a clean separation of responsibilities, facilitating both maintainability and future expansion. This foundation supports integration with external coding platforms and positions GoatCapella as a promising tool for learners seeking structured, motivating, and socially enriched coding practice.

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TECH STACK:

