PROJECT REFLECTION

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WEB TECHNOLOGIES

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What I Learned About Servers and AI

Building and launching a software application taught me important things about two areas: how hard server development is, and why we must use AI carefully. These lessons show that building good software is not just about technical skill but its also about being morally responsible.

Lessons in Server-Side Development

The biggest things I learned about server development are how to balance state management, performance, and security. It is complex to keep track of who the user is and make sure their data stays correct when the app talks to the server many times.

The most important thing is that the server is the only place where data is truly correct, and it must be the main wall against attacks. Rules like authentication and authorization are not just options, they are mandatory security protections. Learning how to manage sessions, check user input, and build good RESTful API design became very important.

I also learned about scaling. Simple searches that work fine with a few users can slow down the whole app when many users try to use it. This showed me we need smart ways to handle the database, like using faster search methods and choosing the right database type. The way I think about organizing data changed completely. The server is the heart of the app's strength and stability.

The Imperative of Responsible AI Use

Using AI tools taught me about responsible AI. The biggest lesson is that we need transparency and fairness. When an AI generates code or text, its results are only as good as the information it was trained on. This means there is a risk of algorithmic bias, where old societal biases in the training data can show up and be made worse in the AI's results. To use AI responsibly, we must check its inputs and outputs carefully to fix this bias, especially when the app is important or high-risk.

Second, accountability changes with AI. The user or developer must always be involved, checking the AI's suggestions and making sure they are ethical and correct. Using AI well

does not mean trusting the output without thinking. It means seeing the AI as a helpful, but sometimes wrong, assistant. We must use human sense to make sure the app is fair and safe for everyone.

This whole project taught me that we need both great technical skills on the server and a strong ethical plan for using AI. The future depends on using AI as a tool, not as a complete solution, and using it with great care.