Your CS Guide

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This project presents an interactive platform designed to offer structured learning pathways in computer science. Aimed at students, educators, and professionals, it addresses the challenge of information overload and fragmented learning by organizing knowledge into dynamic, visual roadmaps. The platform covers core domains such as frontend and backend development, algorithms, and data engineering.

The key problem the project solves is the lack of clear, localized, and goal-oriented guidance in computer science education—especially in the Georgian academic context. Many learners struggle to find coherent sequences of resources or to relate global content to local curricula.

The solution is based on a modular, scalable architecture combining interactive UI/UX design with personalized learning tools. Users can explore customizable roadmaps, access curated resources (books, tutorials, videos), and track their progress. Backend logic supports localized content delivery and secure data handling.

Technologies used include:

- Frontend: Next.js for building responsive and interactive interfaces with server-side rendering.
- Styling: CSS for consistent and adaptive design.
- Backend: Spring Boot and Spring Security for building RESTful APIs and ensuring secure authentication and user management.
- Database: PostgreSQL for structured data storage, including roadmap nodes and user progress.
- Deployment: AWS for backend services.

By combining modern technologies and educational design, the platform empowers users with clarity, structure, and access to both global and local opportunities in computer science.

References

[1] Spring in Action by Craig Walls