Literature Review

The growing importance of social connection sites on the web is well illustrated through a series of various studies, which chronicle the shift away from basic content-sharing tools and toward sophisticated, enlightened systems of engagement. Heidemann et al. [1] provide a thorough overview of Online Social Network (OSN) growth and evolution, tracing the arc of their development from early forays at Sixdegrees through to present-day global dominance by such examples as Facebook. Their work explores how these sites function as modern digital communities in which users can navigate through identities, maintain social ties, and interact through varied interactive interfaces like messaging, content sharing, and virtual "walls." They also point out structural characteristics like social graphs and activity networks, where central users (or hubs) can exert an influential role in determining communication dynamics and engagement patterns. Simultaneously, Irfan et al. [2] adopt a more formal writing style and point out how Social Networking Services (SNSs) are increasingly getting intertwined with context-aware technologies such as semantic web components, user modeling, and emotional analysis. They argue that traditional media-based interactions are being replaced by systems that understand user behavior, preferences, and psychological states to enable more accurate and rewarding interactions. These findings are supported by Owusu et al. [3], who examine Social Network-Based Recommendation Systems. They classify recommendation systems as content-based, collaborative, and hybrid approaches and describe how the integration of social information into these systems—friend relationships and group behavior, for example—enhances accuracy and relevance. They also mention common shortcomings such as cold start problems, data sparseness, and over-specialization that social network integration can mitigate. Collectively, these studies show a good research foundation for building interest-centered social websites that prioritize extensive user interaction over typical interaction. By leveraging OSN infrastructure borrowing, recommendation algorithms, and semantic social technologies, this project aspires to a fix beyond passive browsing to actively

support actual relationships between individuals who share similar interests and passions, hopefully lessening isolation and enhancing community participation.

References

[1] J. Heidemann, M. Klier, and F. Probst, "Online social networks: A survey of a global phenomenon," *Computer Networks*, vol. 56, no. 18, pp. 3866–3878, Dec. 2012, doi: 10.1016/j.comnet.2012.08.009.

[2] M. Irfan, M. Shahid, S. Khan, and M. A. Khan, "Survey on social networking services," *International Journal of Computer Applications*, vol. 68, no. 22, pp. 7–13, Apr. 2013, doi: 10.5120/11753-7270.

[3] S. Owusu, S. Chen, and L. Zhou, "Social network based recommendation systems: A short survey," in *Proc. IEEE Int. Conf. Social Computing*, Sep. 2013, pp. 882–887, doi: 10.1109/SocialCom.2013.134.

Technology Review:

The social connection platform suggested makes use of a combination of novel, successful technologies to offer a reactive, scalable, and interactive user interface. The selected technologies are ReactJS for the frontend UI, Express.js for server-side processing, and SQL for data storage in structured format.

Frontend: ReactJS

ReactJS is a JavaScript library provided by Facebook to build interactive user interfaces. It allows developers to build reusable UI components, which improves consistency and maintainability. The use of a virtual DOM ensures fast and efficient rendering, which proves beneficial for features like real-time chat, notifications, and dynamic user feeds. React js component model

supports scalable UI design and user experience using responsive design practices.

Backend: Express.js (Node.js Framework)

Express.js is an agile and lightweight Node.js framework for dealing with backend logic and HTTP requests efficiently. Express.js is specially optimized for streamlining the routing, API creation, and addition of middleware so that it can be ideally used for developing server-side logic and dealing with database interactions. Express's event-driven, non-blocking structure works to handle numerous requests from users in a speedy manner, which is needed for applications such as login systems, friend requests, and event listening.

Database: SQL (Structured Query Language)

An SQL database (PostgreSQL or MySQL) is used for storing and structuring data. SQL databases support high data accuracy, relation integrity, and complex querying capabilities, making them a good choice for storing user information, relationships, posts, messages, and event data. Relational tables also facilitate easier structuring and retrieval of related information, like shared interests, membership in groups, and user activity.

Overall Integration

Together, these technologies make it possible to create a responsive and efficient social connection platform. React handles user-side logic, Express takes care of data logic and communication, and SQL stores structured data securely and reliably.