

# Research and Analysis on FERN Stack in E-Commerce Web Application Development

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**Abstract:** *With web technology rapidly expands out in recent years, there is a significant trend that Hypertext Markup Language (HTML)5 turns into a worldwide web consortium and leads the front-end development to stand on the front stage of internet history. Whereas data transfer frequency rates increase significantly due to adaptation of dynamic website. However, there are numerous front-end development frameworks and libraries such as React, Angular and Vue. Similarly, in back-end we have MYSQL, MongoDB and Firebase. How to select a suitable framework or library to establish the e-Business and reach out to maximize the user experience becomes a priority operation in full stack web development. This paper starts with introducing an overview of the leading frameworks and libraries in the field of full stack development and examine each performance with respect to FERN stack in web services. How it is implemented in e-Business under separate commercial criteria. Finally, the paper summarizes the contributions and concludes with some possible future of FERN stack development in e-Business.*

**Keywords:** Bootstrap, HTML5, CSS3, JavaScript, Firebase, e-Business

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