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Study of Higher Categories

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My research focuses on understanding the fundamental structures of higher categories, which are mathematical objects that generalize the notion of sets and categories to multiple levels of composition. Specifically, I study a powerful framework called topos theory and its connections to type theory, which has applications in fields such as computer science and physics. My master's work has involved investigating complete Segal spaces, a model for $(\infty,1)$ -categories, and generalizing the twisted arrow construction to this setting. Through this work, I aim to contribute to the development of a more comprehensive theory of higher categories and to further our understanding of the nature of mathematical structures. This research has personal significance to me as it allows me to pursue my passion for abstract mathematics while also exploring its connections to other fields and real-world applications.