

# Why should we care about category theory?

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Abstract: One of the first mathematical concepts we learn as children is counting, and when we do so, we think of counting the number of elements in a specific set. Soon after, we forget about sets and we just consider the abstract numbers themselves. This abstraction simplifies many things, but it also makes us forget about some structure that we had when we were thinking about sets. That structure can be encoded by a category. In this talk we will describe certain concepts in category theory, and you will realize that in most of your mathematics classes you have been working with categories, you just didn't know about it. There will be plenty of examples that will show that category theory provides a unifying language for mathematics, and that many constructions are more naturally understood when they are seen through the categorical lens.