# Things I've learnt today

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Random things learnt on any given day. This template is based heavily off of the one produced by Kevin Zhou.

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## 1 November 13, 2024

## 2 What is Obstruction Theory? [1]

The basic question is

"Given a continuous function  $f:A\to C$ , can we find extend it to a smooth function  $f:X\to Y$  where  $X\supset A,Y\supset C$ ?"

To begin, we consider CW Spaces. Then build up to more.

#### 2.1 CW Spaces

Consider continuous map  $f: X \to Y$  where X is a CW Complex.

## References

[1] Dmitry Fuchs Anatoly Fomenko. *Homotopical Topology, Second Edition*. Springer International Publishing Switzerland, 2016.