

# LINEAR ALGEBRA

Ben Zelditch  
Cornell University  
`bz87@cornell.edu`

*He who controls the past controls the future. He who controls the present controls the past.*

- George Orwell

## **1 Motivation**

I have always had an uneasy relationship with linear algebra. The first time I encountered this subject was the second semester of my senior year of high school. Having been already accepted into college, I wasn't exactly a star student in any of my classes and linear algebra was no exception. The concept of a vector space and a linear transformation between two vector spaces was totally lost on me. I think my only takeaway from that class was the memorization of the formula that computes the determinant of an  $n \times n$  matrix.

Fast forward to my first semester at Cornell. As an overzealous freshman I enrolled in Math 2230, which is the theoretical linear algebra and calculus course designed for freshman math majors.

## **2 What to Expect**