

Week06 – Error-correcting codes

George McNinch

2024-02-21

- [\[Problem set 4\]](#) due 2024-03-01

This week, I'll finish up the introduction to linear codes that I started last week. My goal in the introduction was to get some examples and the flavor of the investigation established.

To give an example of some substance, I'm going to describe a construction of a linear code using *projective space* over a finite field.

After that, we'll pause to recall some facts about finite fields.

And then we'll quickly discuss [Shannon's Theorem](#), followed by a discussion of some basic observations about block codes.

Regarding the homework (see above), one probably asks you to use *syndrome decoding*, which I probably won't discuss until *next week*. But the homework isn't due until March 1.

Bibliography