

1 |  $p(T)$ 

def

Suppose  $T \in \mathcal{L}(V)$  and  $p \in \mathcal{P}(\mathbb{F})$  is a polynomial given by

$$P(z) = a_0 + a_1z + a_2z^2 + \cdots + a_mz^m$$

for  $z \in \mathbb{F}$ . Then  $p(T)$  is the operator defined by

$$p(T) = a_0I + a_1T + a_2T^2 + \cdots + a_mT^m$$

## 2 | using

deps

## 2.1 | Operator Exponents

## 3 | intuition

## 3.1 | Exactly how you would expect it to work

## 4 | results

4.1 | For some operator  $T \in \mathcal{L}(V)$  the function from  $\mathcal{P}(\mathbb{F})$  to  $\mathcal{L}(V)$ 

$$p \mapsto p(T)$$

is linear