Background

- In the past couple years, attacks on the Payment Card infrastructure in the United States have spiked.
- Data breaches at major organizations have lead to the compromise of credit card data of several customers.
- Magnetic stripe cards, that are non-compliant to EMV standards continue to be used in the USA leaving cardholders vulnerable to unsophisticated frauds.
- Unlike in most other nations, in the US EMV has given the issuers an option to choose between issuing cards as Chip-PIN or as Chip-and-Sign.
- The transition from magnetic stripe to chip has been moving at a slow pace owing to merchants being unhappy about cost of upgradation of POS terminals.

Research Question

- Assess consumer awareness regarding technical security vulnerabilities in the current implementation of Payment Cards in the United States.
- Survey consumer’s preference for a specific card technology over others before and after being briefed about vulnerabilities in each technology.

Proposed Study Design

- Using survey questionnaires to assess participant’s knowledge about payment card security features, preference for a specific card type before being briefed about vulnerabilities and after, their attitude towards change and levels of passive risk-taking behaviour.
- Simulate a payment environment and have participants test with different card types. Gather post-test feedback regarding ease-of-use, time taken for transaction and participant’s order of preference for different card types.