



**Our Results**

Can we obtain sparse optimal streaming algorithms with fast update times?

**• Yes! For many problems.**

Review

- Use PRGs to define the sketching matrix  $S$

Show PRGs need to fool all adversaries that earlier analyses

- Define a PRG with larger branching factor to retrieve  $S_{*j}$  quicker







# Our Results

- Can we obtain space optimal streaming algorithms with fast update times?
  - **Yes! For many problems.**
- Preview
  - Use PRGs to define the sketching matrix  $S$
  - Show PRGs need to fool smaller space algorithms than earlier analyses
  - Define a PRG with larger branching factor to retrieve  $S_{*i}$  quicker

# Our Results