Make Data Useful

Greg Linden

*"[Help] people **find and discover anything** they want to buy online"*

- Jeff Bezos

Help people **find and discover anything** online

"Encourage experimentation
... as much of it as possible"

- Jeff Bezos

What is the goal?

Revenue   Clicks   Visitors

Retention

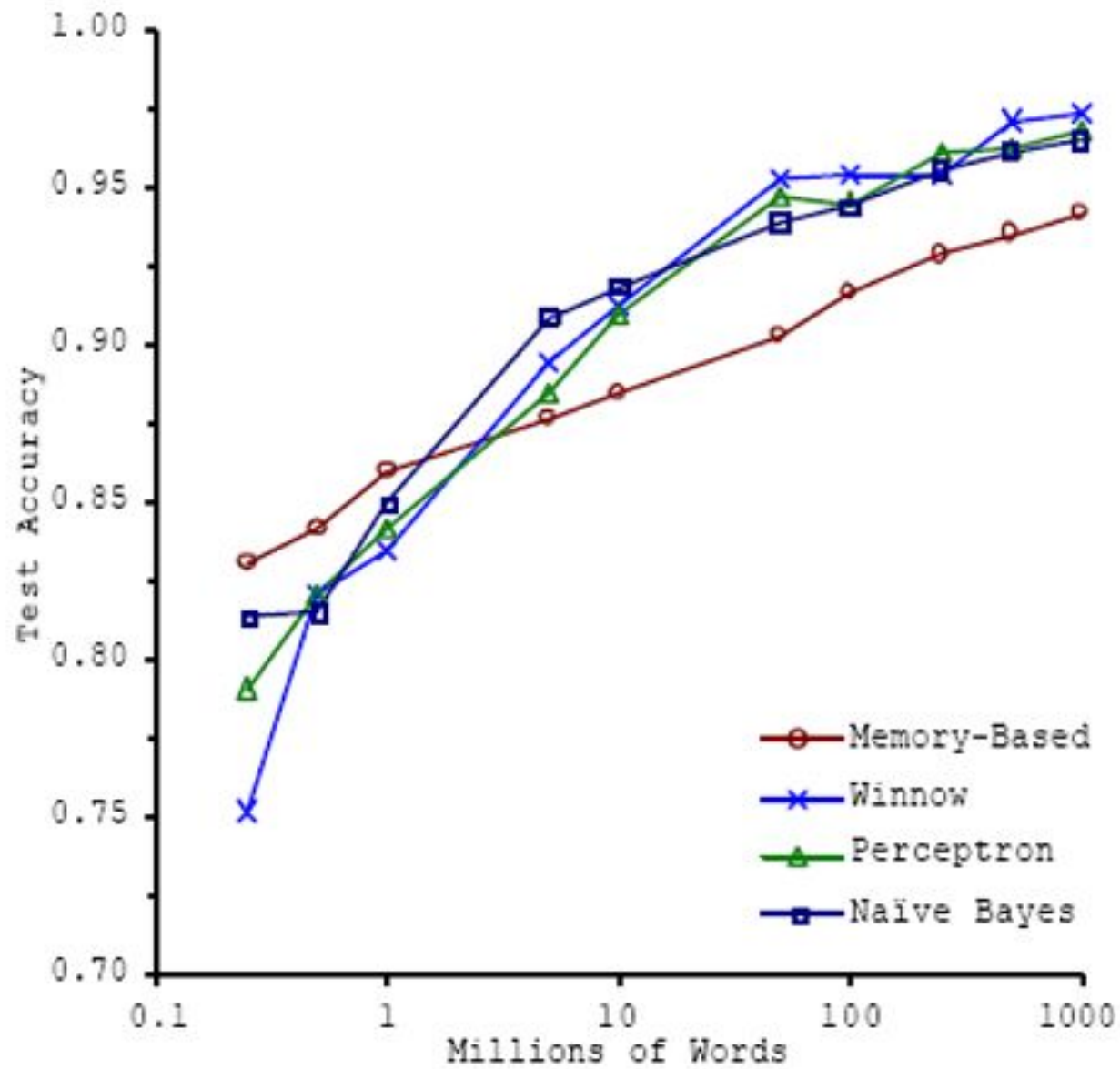Traffic   Time on site

Customer acquisition

Measure
Learn
Optimize
Iterate

"Worry about the data first before you worry about the algorithm"

\- Peter Norvig

[Banko and Brill, 2001]

On the design of recommendation features

Design to encourage forgiveness of mistakes

Help when help is wanted

Customers who bought the items in your shopping cart also bought:

- Sid Meier's Civilization IV: Warlords Expansion Pack by 2K Games
- Microsoft Age of Empires 3 by Microsoft Software
- Battlefield 2 by Electronic Arts
- Quake 4 by Activision
- Quake 4: Special Edition by Activision

"Discovery is when something wonderful that you didn't know existed, or didn't know how to ask for, finds you."

- Fortune Magazine

Discovery of the new and surprising using the recent

"Users really respond to speed."

- Marissa Mayer

+500 ms ➤ -20% traffic

@ Google

+100 ms ➤ -1% sales

@ Amazon

Speed matters!

- Measure, then optimize toward a goal

- Big data first, then algorithms

- Encourage users to forgive you

- Help when help is wanted

- Surprise and focus on the new

- Speed matters