

The Language of Emoji, Sentiment Analysis and Machine Learning 🍌 🤪 🙄 😎 😭 😏 😐

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**“Emoji are the Fastest
Growing Language in
History”**
-The Telegraph, 2015



**of the population use
emoji to express
themselves**

Source: Emogi - Emoji Report,
2016



2.3
Trillion

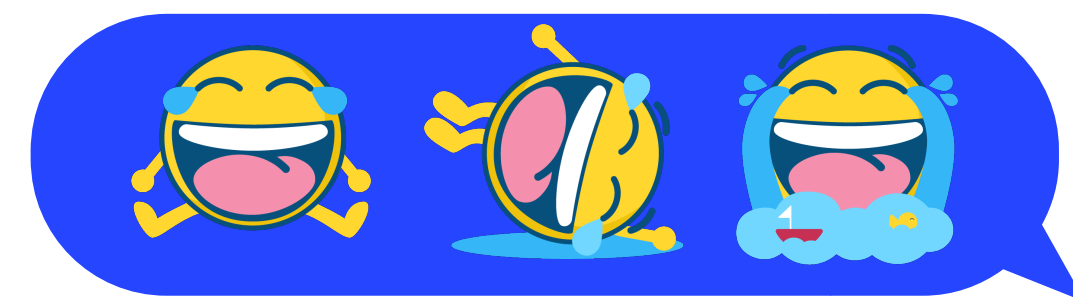
mobile messages that
incorporate emoji were sent in

Source: Emogi - Emoji Report,
2016

2016



Consumers Want More Emoji - Including from Brands



75%
of users want
alternative
emoji options

59%
of users would
choose branded emoji
over standard emoji

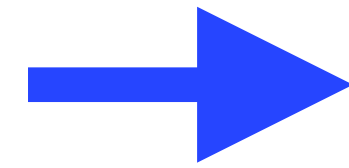


Source: Emogi - Emoji Report,
2016

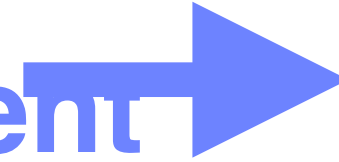
Opportunity



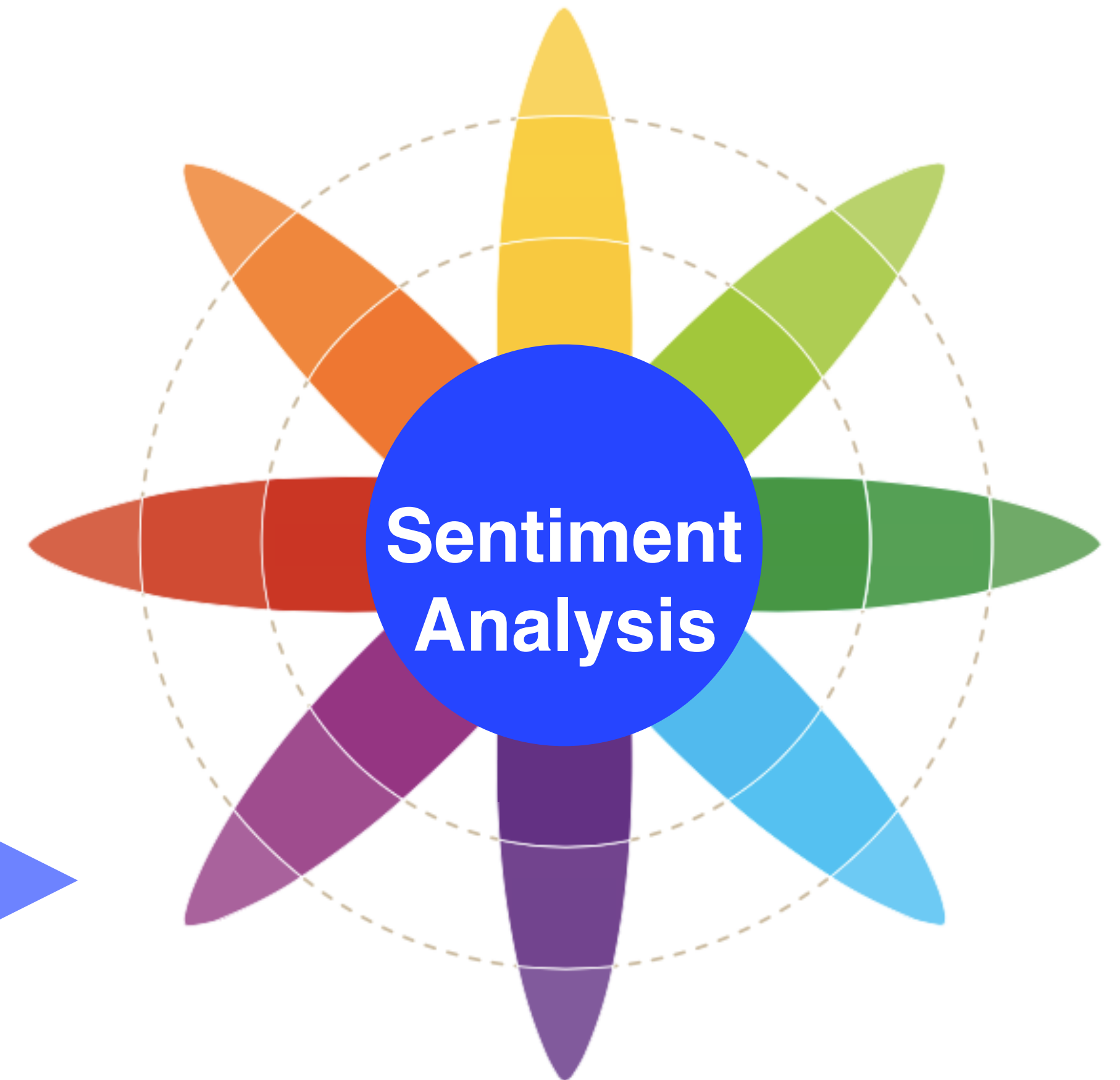
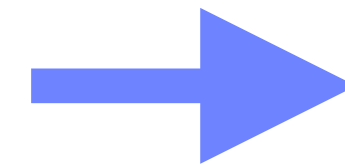
**Demand for More
Content**



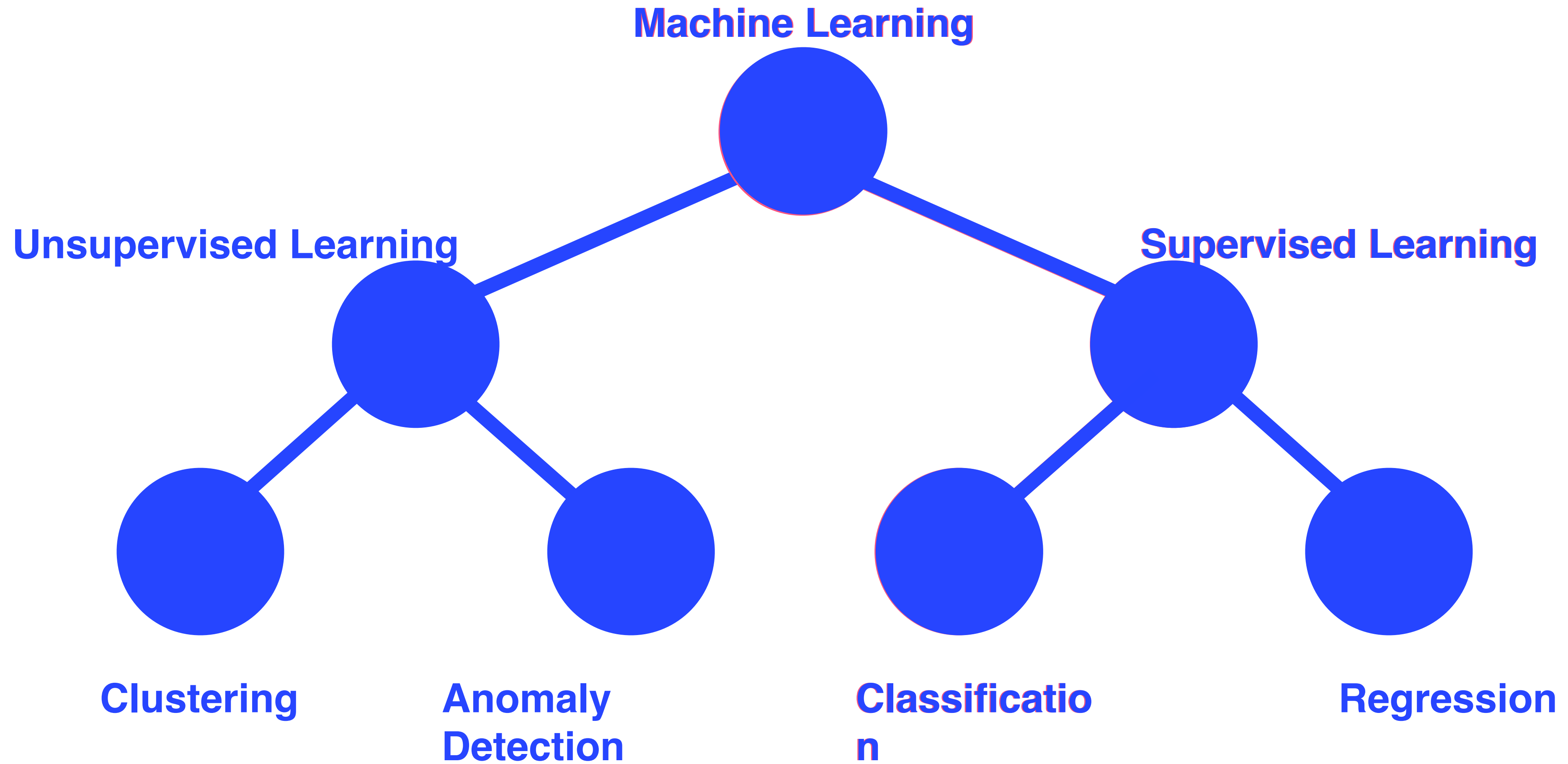
Zero App Download Environment



**Development and Marketing
Investments**

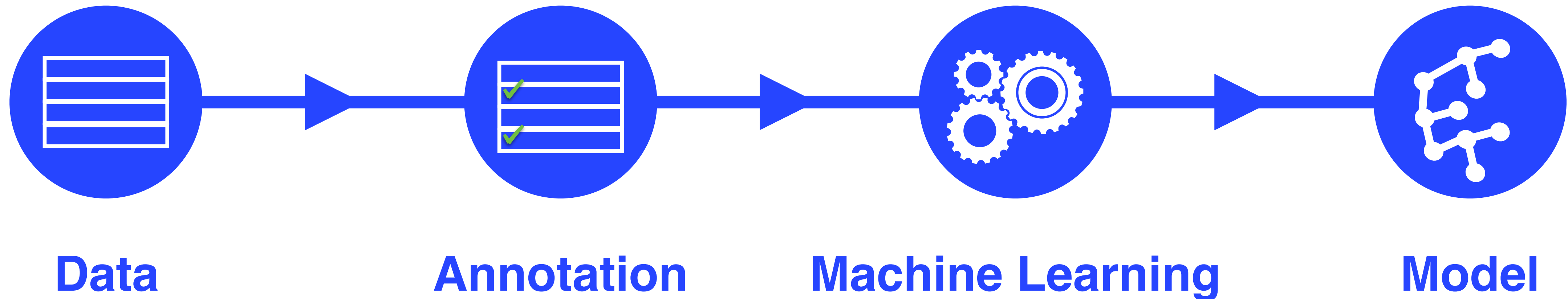


Machine Learning 101



Supervised Learning

- 😓 Labor intensive
- 😓 Prone to human error
- 😓 Costly

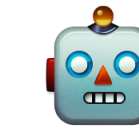


Distant Supervision Learning

“I think I have an obsession for dominos hot wings 🤔”

“Starbucks to fix my mood please 😊”

“My favorite panera breakfast 🍳”



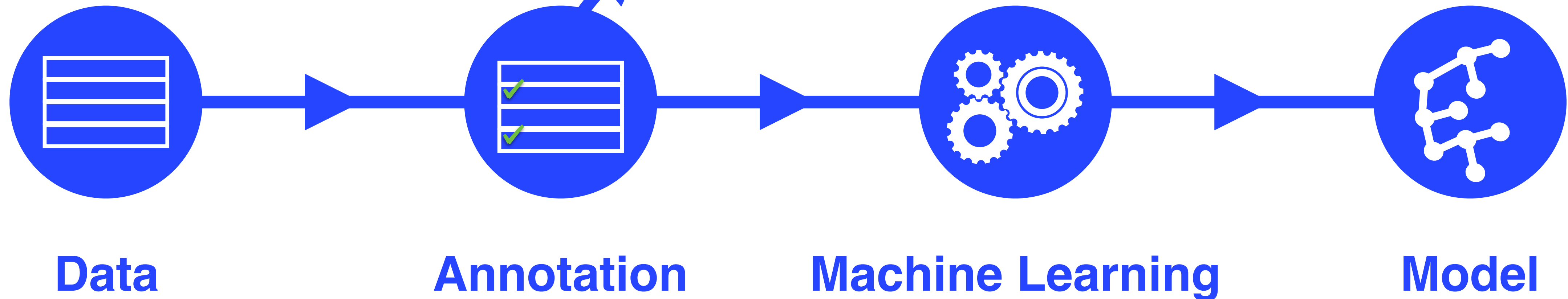
Automation



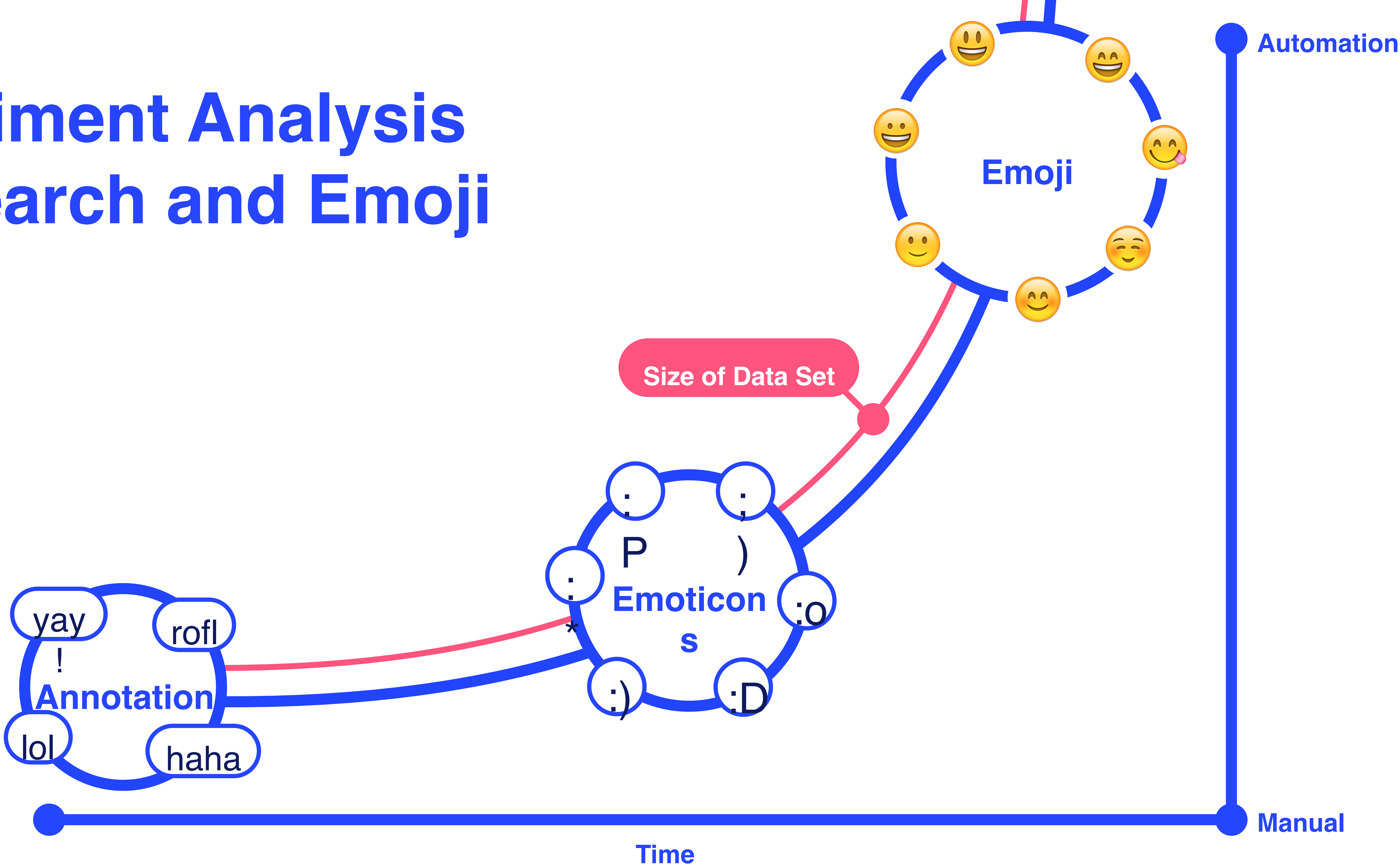
Cost effective



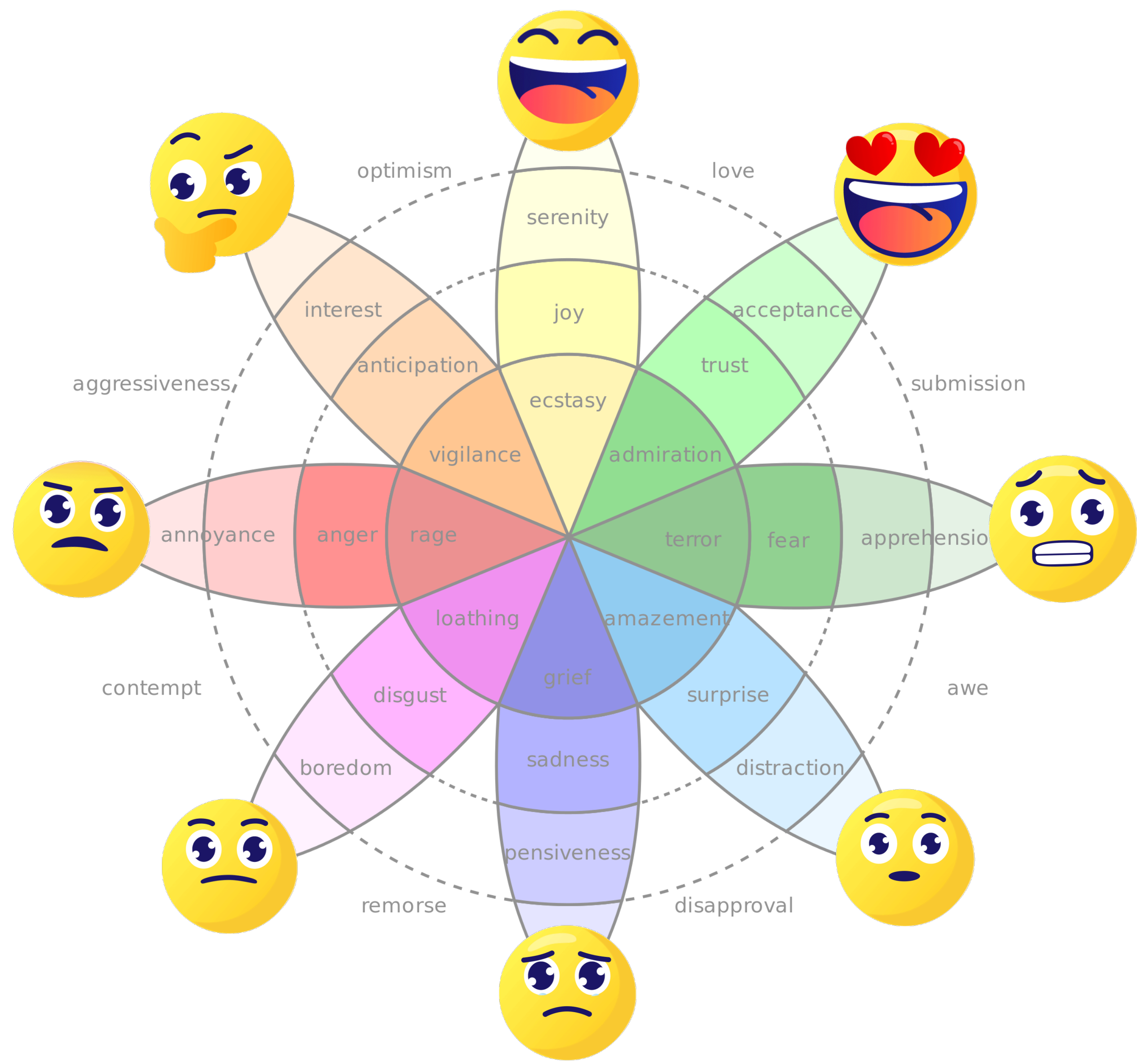
Potentially noisy



Sentiment Analysis Research and Emoji



Wheel of Emoji



Sentiment Analysis @

Emoji

“Starbucks to fix my mood
please 😊”

“having a pizza date by myself in Walmart parking lot
😊”

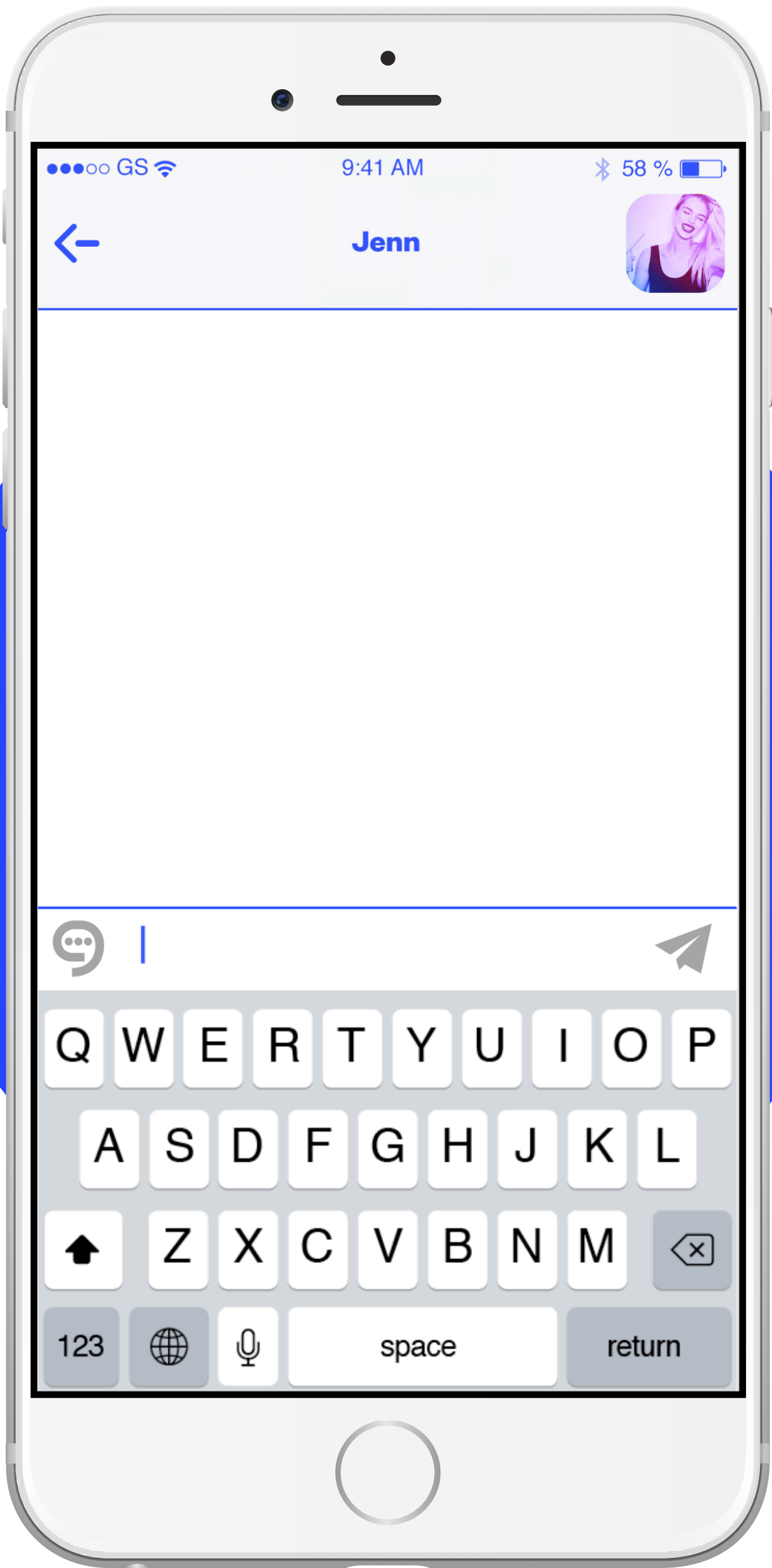


“My favorite panera breakfast 😊”

“I think I have an obsession for dominos hot
wings 🤔”

Machine Learning

Model

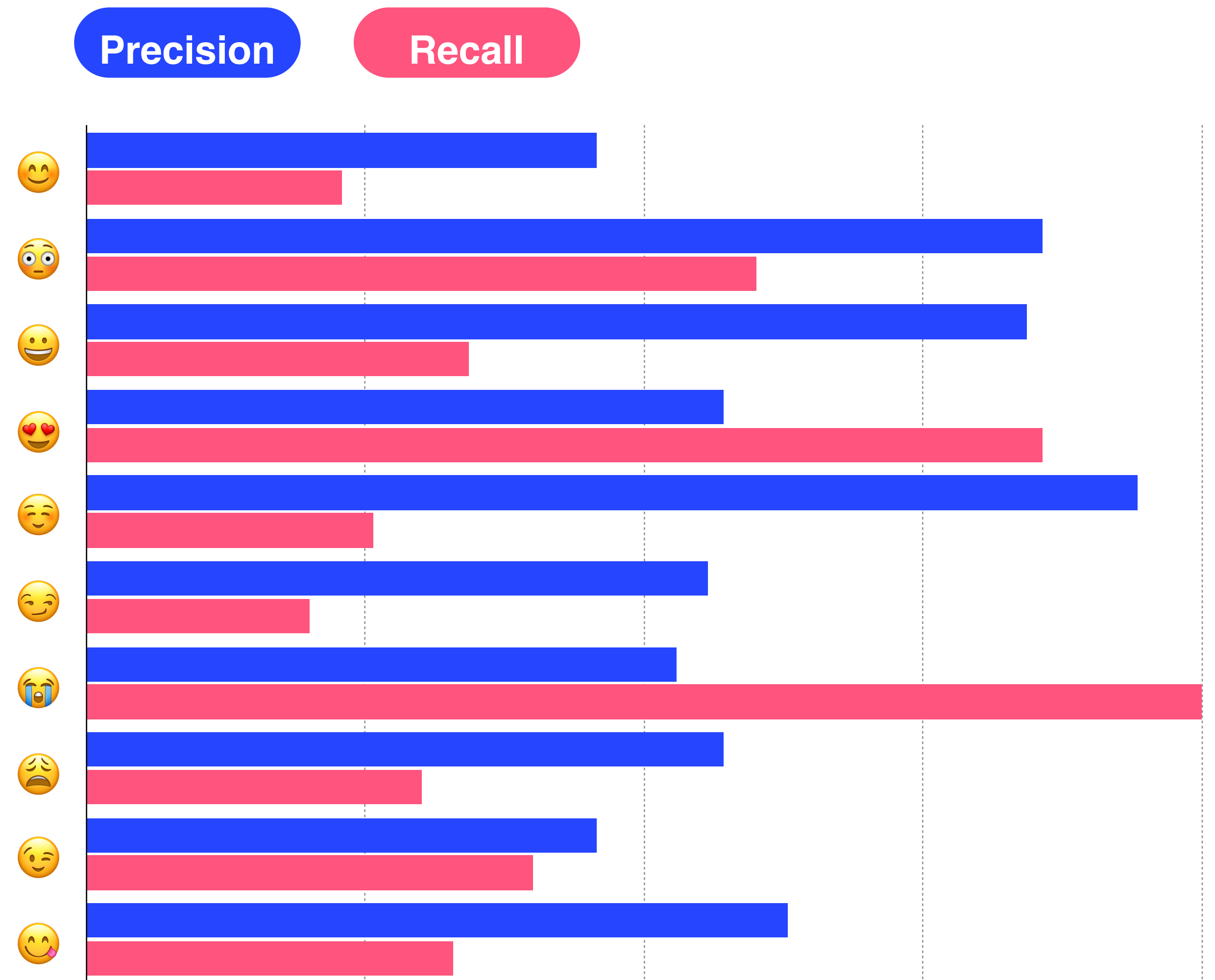


Advantages

- Wide topics
- Short text
- High emoji use
- Data volume

Challenges

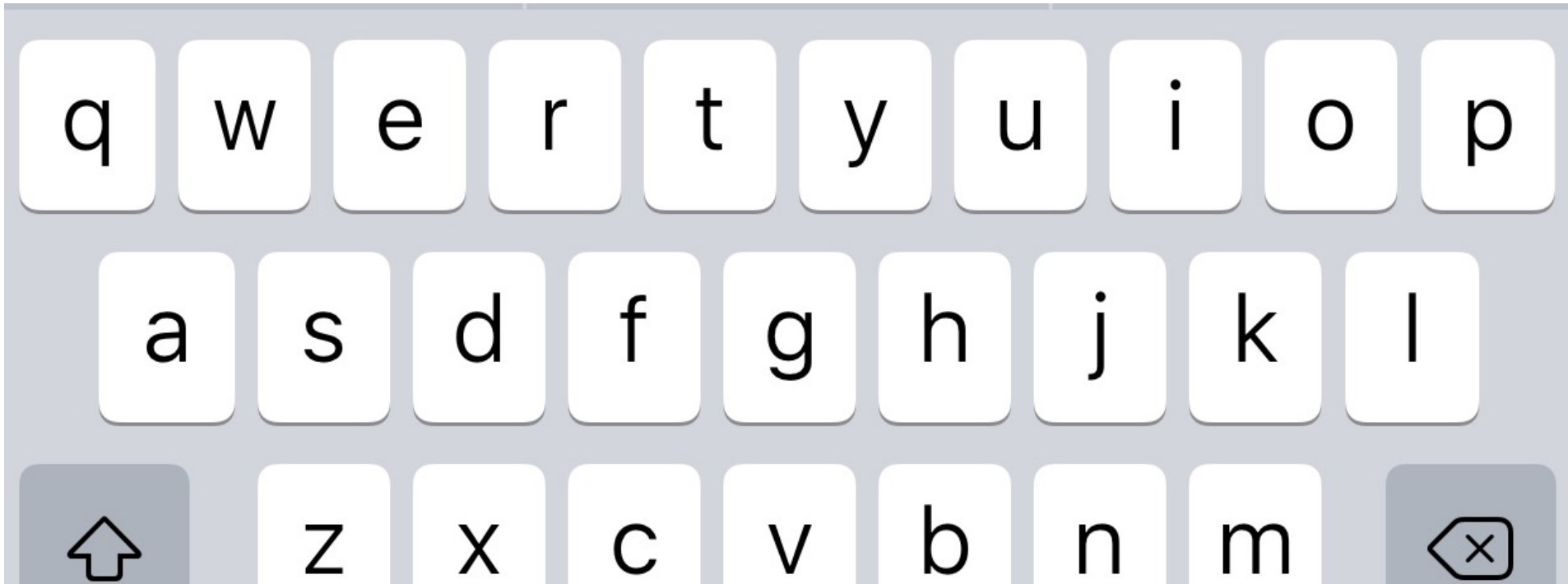
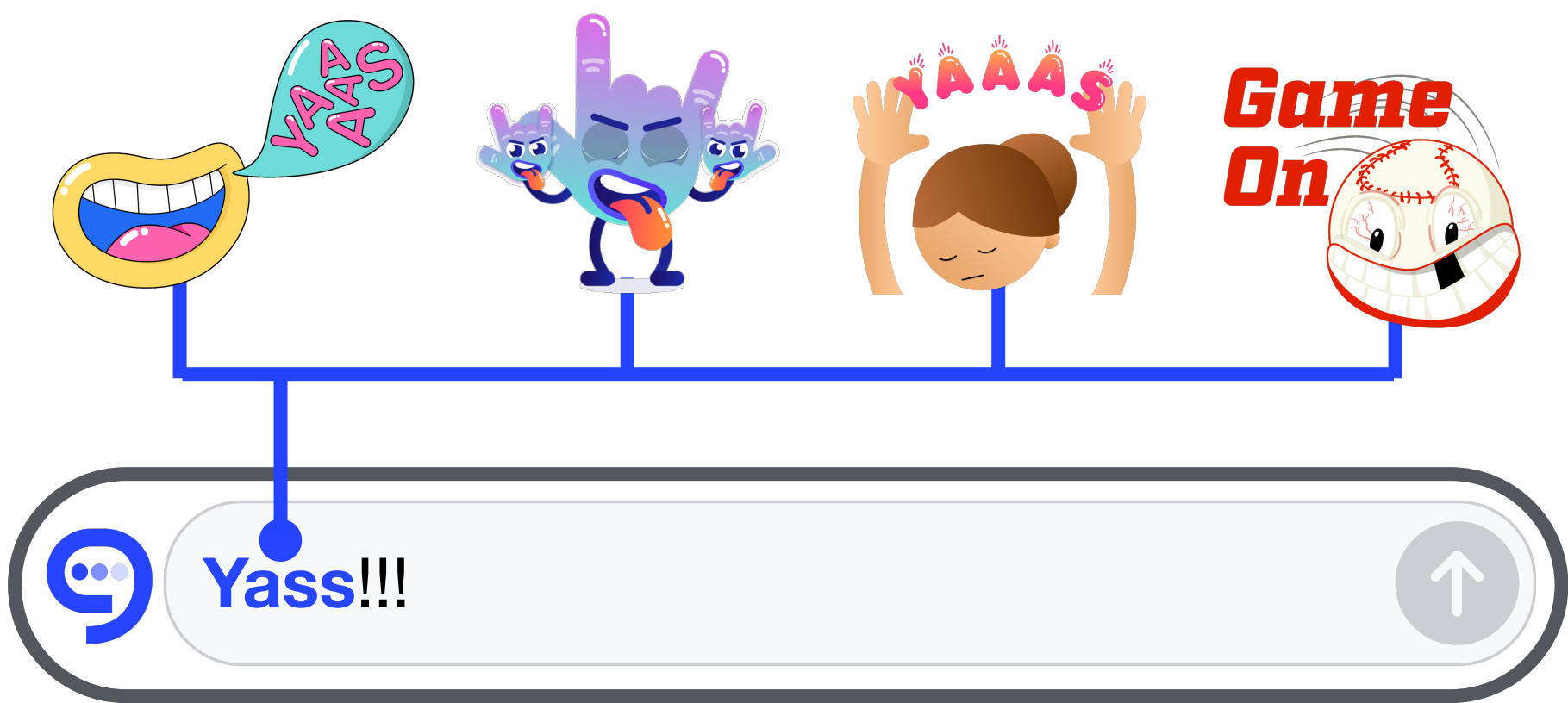
- Contexts (social vs personal)
- Idiosyncrasy (#hashtag / @atmark)
- Idiomatic and phrasal emoji
- Data Privacy
- Skewed distribution



Sentiment in Action

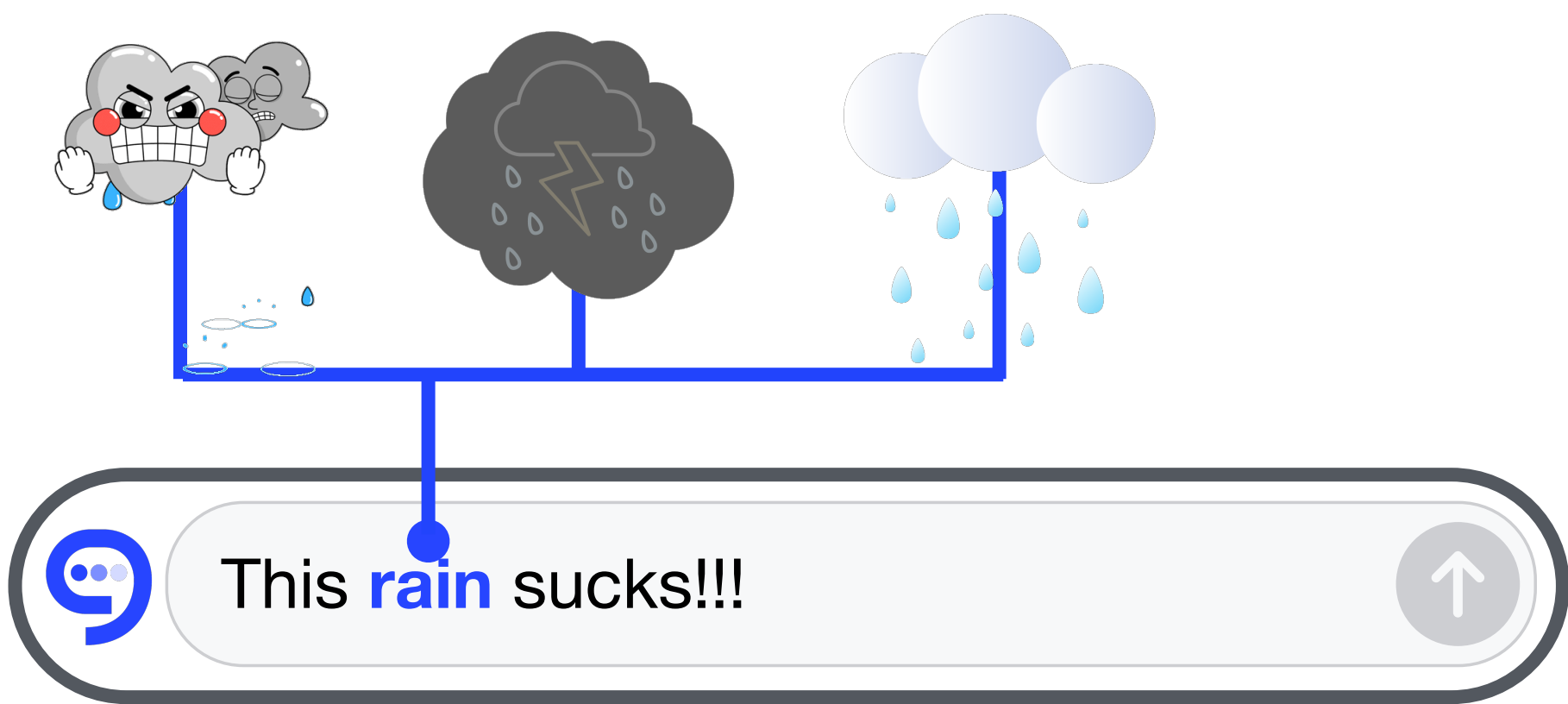
Wanna hang tonight?

Sure 😊. Do you want to watch the



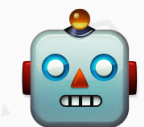
My plans are

I know, totally forgot an umbrella





Visual contents



Sentiment Analysis for content suggestions



Distant Supervision Sentiment Analysis with Emoji

Thank You!

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