India’s Massive Input Problem
Can we reduce dependency on The Keyboard?
Building products in the AI era

Stickers
Visually Express
Communicate feelings and emotions
2013 Characters
2015
Hindi
(English Script)
2016 Vernacular
2017
Animated
10X Sticker Discovery
Recommend right sticker at right time!

10X Sticker Content
Have a sticker for anything you want to say!
10X Sticker Discovery

Key Challenge

Making sense of noisy, transliterated text across Indian languages.
Message Embedding

**Encoder**

- GRU layer
  - Word embedding
  - CharCNN embedding
- 1-Max Pooling
- Narrow convolution with filters $H \in \mathbb{R}^{k \times d_c}$

**Model Architecture**

- Dot product
  - $e_i \rightarrow e_{i+1}$
  - Fully Connected Layers
  - $e_{i+1}$

**Building products in the AI era**

- `what's` up ?
- `i` am `gud`
Building products in the AI era
Sticker Recommendation

Chat Context
- Time / Event of day
- Situation
- Recent messages
- Relationship
- Language

Text being typed

Predict Message
- Hello
- Hey
- Hello how r u?

User Context
- Sticker Preferences
- Age, Gender

Relevant Stickers
AI @ Hike

NLP  Relevance  Social Network  Computer Vision
10X Sticker Content

Key Challenge

40K only covers 10-15% of Vocabulary
10X Sticker Content

Key Challenge

40K to Infinite Stickers in a Scalable Way
Infinite Machine

“Phrase”

Language

Script

Happy    Sad    Love    Angry
Automatic Sticker Assembly

Components

Sticker Asset Library

Fonts

Cheddar Jack BLWBRUSH Lobster CREEPSTER Funkies

Texts

Where? Wassup Good Morning

Character Parts

Colour Palette

Creating stickers from parts
Hindi - Fonts

- **लैला**
  - Laila
  - AMS Khadu
  - IndiaFont

- **बालू**
  - Baloo Devanagari
  - EkType.in - FREE

- **नमस्ते**
  - AMS Hastkala
  - IndiaFont

- **कोहिनोर**
  - Kohinoor Devanagari
  - Indian Type Foundry

- **कुकुन**
  - KunKun Devanagari
  - Indian Type Foundry

- **जिदेशाक**
  - Director Devanagari
  - Indian Type Foundry

- **वाल्ट**
  - Volte Devanagari
  - Indian Type Foundry

- **बर्श्मोस**
  - Brahmos Devanagari
  - Indian Type Foundry

- **अखण्ड**
  - Akhand Devanagari
  - IndiaFont

- **नमस्ते**
  - AMS Handwriting


Tamil, Gujarati - Fonts

Akhand Tamil
Indian Type Foundry

Mukta Malar
EkType.in - FREE

ITF Gujarati
Indian Type Foundry

Kohinoor Tamil
Indian Type Foundry

Kohinoor Gujarati
Indian Type Foundry

Akhand Tamil Condensed
Indian Type Foundry

Akhand Gujarati
Indian Type Foundry

Director Tamil
Indian Type Foundry

Mukta Vaani
EkType.in - FREE

Baloo Thambi
EkType.in - FREE

Baloo Bhai
EkType.in - FREE
Looking Ahead
User Generated Stickers

Creating stickers from parts
Selfie Stickers

- Cheers!
- Jai Bhadra Kali!