Idea Paper Presentation on

Intent Classification from Banglish Facebook Comments: Identifying what Customers Want

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Background Study

- E-Commerce through Social Media is a blooming topic nowadays.
- Beside many tech giants like Amazon, eBay etc. many small entrepreneurs choose social platform for their business.
- E-commerce through social platform has several advantages like,
  - Reaching new customers is easy and fast.
  - Communicating with people is easy and casual.
  - Low maintenance cost.
- **Facebook** is one of the most popular platforms for e-commerce.

Background Study (Contd.)

- Generally seller is social platforms create public posts about their products in Facebook.
- People are open to comment their opinion on those posts.
- In Bangladesh as well as Bengali speaking people all over the world uses Bengali phonetic form in English known as **Banglish** for facebook commenting.
- Intent analysis from those comments can help sellers to understand whatever the customer's view on the product.
- We've proposed a model to classify intention of the customers from facebook banglish comments.

Literature Survey

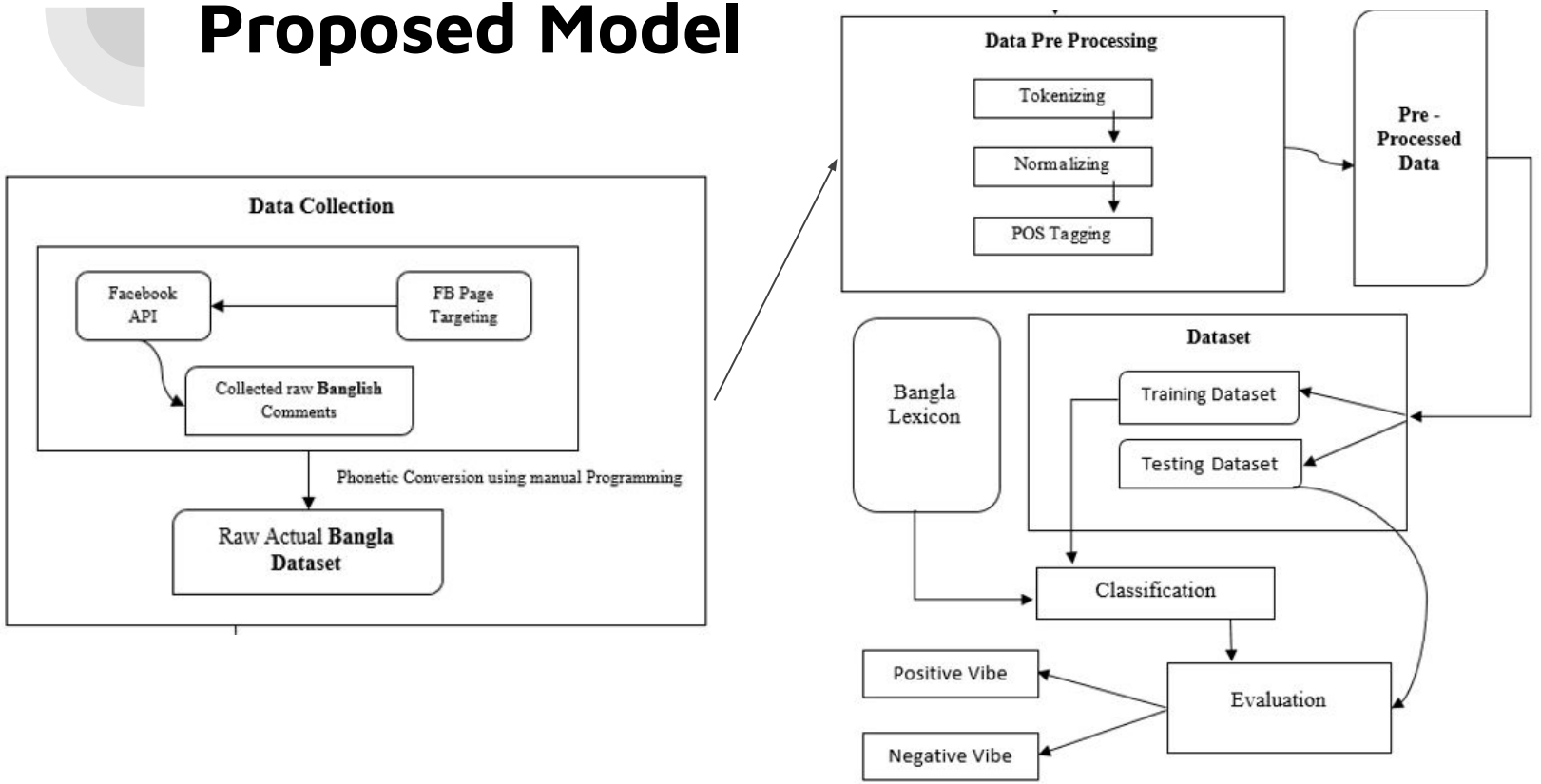
- Sentiment Analysis in Bangla Microblog Posts (**Chowdhury et al., 2014**).
- Intent classification of short text of Social Media (**Purohit et al., 2015**).
- Collecting and Processing Arabic Facebook Comments for Sentiment Analysis (**Abdel Jalil et al., 2017**).
- Converting Banglish words into Bangla word. (**Jia Uddin et al., 2015**).
- Bangla phonetic Identification using DWT. (**Santanu et al. 2016**).
- Banlga sentiment analysis using Machine Learning (**Nusrath et al. 2019**)

Proposed Model

- Proposed Model has mainly three parts:
  - **Data Collection** - Using Facebook page targeting API.
  - **Data Pre-Processing** - Lexical Analysis like tokenizing, normalizing & POS Tagging.
  - **Classification** - Using supervised classifier like SVM, ANN etc.

- This is currently a **hypothetical** model. But we have full plan to implement it soon as possible.

Proposed Model



Potentials of this Research

- No broad level works have done in sentiment analysis in Bangla, specially with Banglish term.
- Our proposed model can be usable for any local languages, only the lexicon of that language is needed.
- This model is also workable for creating social comments Dataset.
- This model is also suitable for other predictions like hate speech detection, rumor detection etc.
- We hope, This research will open a window for the field of Bengali Language processing field in social media based E-commerce.

Some Limitations & Future Goals

- Though it’s a hypothetical model, we could make it impossible level **perfect**, but first we thought about real time implementation.
- We haven’t consider **English-Banglish** mixture comments here, in future we’ll do.
- Lexicon is a limited dataset of positive and negative tokens, we should work with an unsupervised approach for categorical classification.
- We’ve shown only binary classification, but n-nary point of view classification would be more helpful to get the customer’s actual needs.

Takeaway

- For being able to respond quickly, prediction of customer's intent view over product is very important.
- This proposed model can be further developed like as followings:
  - Data collection using Data Mining Techniques instead of manual programming.
  - Unsupervised approach for categorize classification instead of Lexicon.
- We hope, This research will open a window for the field of Bengali Language processing field in social media based E-commerce.

“If you steal from one it’s plagiarism, if you steal from many it’s called research.”

- Wilson Mizner

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Thanks!

Question Time!

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