

# Natural Language Processing Mini-Project Proposal

## Word Prediction

### **Project Idea:**

We all know how difficult it can be to type on digital keyboards, especially for the less tech savvy leading to numerous typos. As a result, even communicating through basic conversation through a mobile phone becomes more difficult than it has to be. One of the major reasons for typos is the small hit box for the different keys on the screen.

"Typo correction keyboard" is a keyboard app which uses machine learning and natural language processing to predict the word the user is going to type and successively increase the size of the hit box for the next character of the word.

For example, if a user wanted to type 'Happy', after typing the first character, we see the second character is an 'a' but the character 's' is very close to 'a' so there is a high chance of accidentally pressing 's' instead of 'a'. Using this app, after the user types 'h', the probability of 'h' being followed by an 'a' is more than the probability of being followed by 's', so we increase the hit box for 'a' and hence decrease the chance of accidentally pressing 's'.

### **Software And Tools:**

Python (3)

GPU (optionally for faster training)

Tensorflow

Python libraries

### **Team Members and Work Summarization**

Team Members	Work Division
Khagendra Adhikari (02)	<b>Data Gathering, Data Evaluation, Prediction.</b>
Dinank Bista (07)	<b>Data Cleaning, Finding Data Representation, Classification.</b>
Sabin Ghimire(13)	<b>Data Classification, Data Inspection, Data Cleaning.</b>
Rajan Mali(25)	<b>Data Evaluation, Leverage Semantics, Vocabulary Structure Accounting.</b>