

# oI Introduction

## I.1 Background

Text entry is one of the most frequent interactions on mobile devices. While predictive text has matured for languages like English, Indian languages—**specifically Marathi**—present unique challenges due to **agglutination**, where words are formed by stringing together multiple morphemes (root + suffix + inflection).

*“Wow this is what a quote is going to look like hmmmmm.”*

## I.2 Motivation

The project initially began as an exploration of voice input methods. However, preliminary investigations revealed a critical friction point in Human-Computer Interaction (HCI): the trade-off between Ease of Typing and User Agency.

WOW THIS IS WHAT A CAPTION IS GOING TO LOOK LIKE HMMMMM.

# Declaration

I declare that this written submission represents my ideas in my own words and where others' opinions or words have been included, I have adequately cited and referenced the sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been appropriately cited or from whom proper permission has not been taken when needed.

*Rhaturaj Mirashi*

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# Approval Sheet

This B.Des Design Project-I titled "Untitled" by Rhuturaj Mirashi, Roll Number 22B3613, is approved, in partial fulfilment of the B.Des Degree at the IDC School of Design, Indian Institute of Technology Bombay.

*Project Guide*

*Chairperson*

*External Examiner*

*Internal Examiner*

# Acknowledgement

I extend my sincerest gratitude to **Professor Anirudha Joshi** for his constant guidance and reception to all the concepts I had for this project, for exposing me to various research papers and researchers in the field of HCI and text input, and for helping me funnel my thoughts into something concrete and valuable.

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# oi Abstract

This project explores novel interaction mechanisms for text prediction in Marathi, specifically addressing the friction points caused by the language's agglutinative nature. This project investigates an alternative "Exploratory Prediction" interface that allows users to construct complex words using numbered shortcuts. The design aims to balance the trade-off between Ease of Automation and User Agency. Quantitative evaluation focused on metrics such as Words Per Minute (WPM) and Keystroke Savings.

# 02 Introduction

## I.1 Background

Text entry is one of the most frequent interactions on mobile devices. While predictive text has matured for languages like English, Indian languages **specifically Marathi** presents a unique opportunity for design intervention due to **agglutination**, where words are formed by stringing together multiple morphemes (root + suffix + inflection).

## I.2 Motivation

The project initially began as an exploration of voice input methods. However, preliminary investigations revealed a critical friction point in Human-Computer Interaction (HCI): the trade-off between Ease of Typing and User Agency. So it was continued as an exploration into prediction input methods.

# 02 Introduction

## I.1 Background

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## I.2 Motivation

The project initially began as an exploration of voice input methods. However, preliminary investigations revealed a critical friction point in Human-Computer Interaction (HCI): the trade-off between Ease of Typing and User Agency.