

AWARE-Text: An Android Package for Mobile Phone Based Text Collection and On-Device Processing

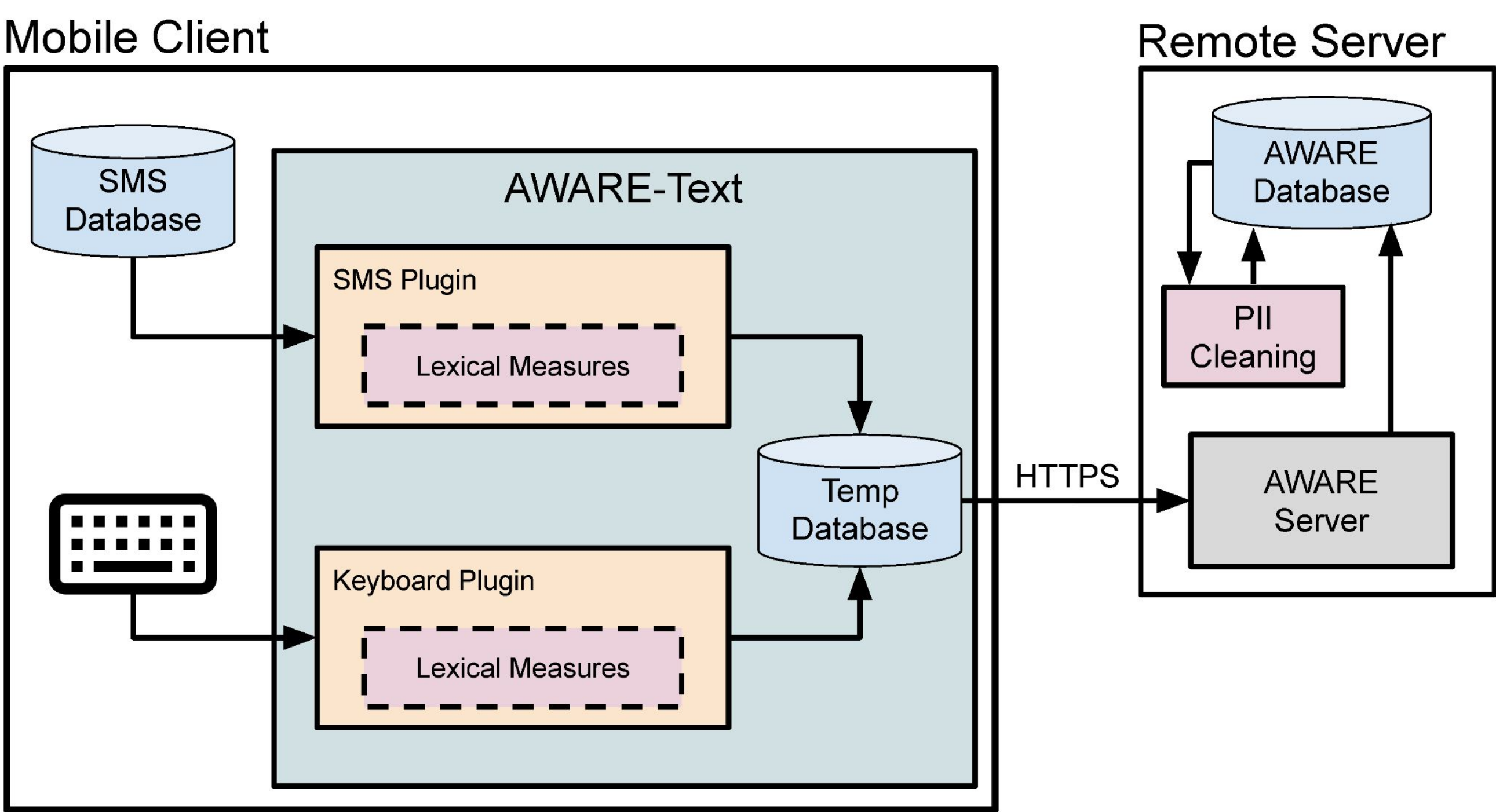
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Introduction

AWARE-Text is an Android app built to collect passive mobile data.

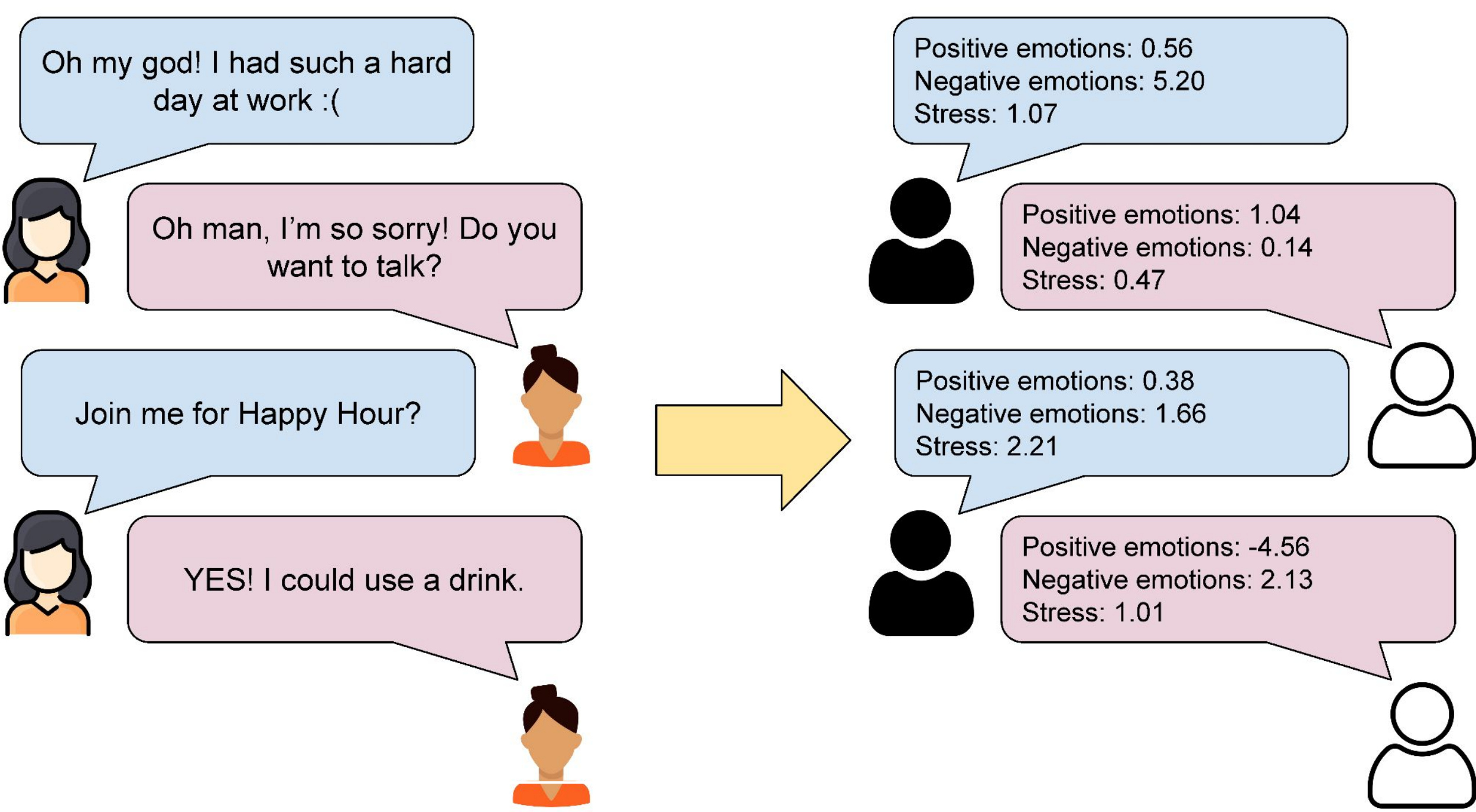
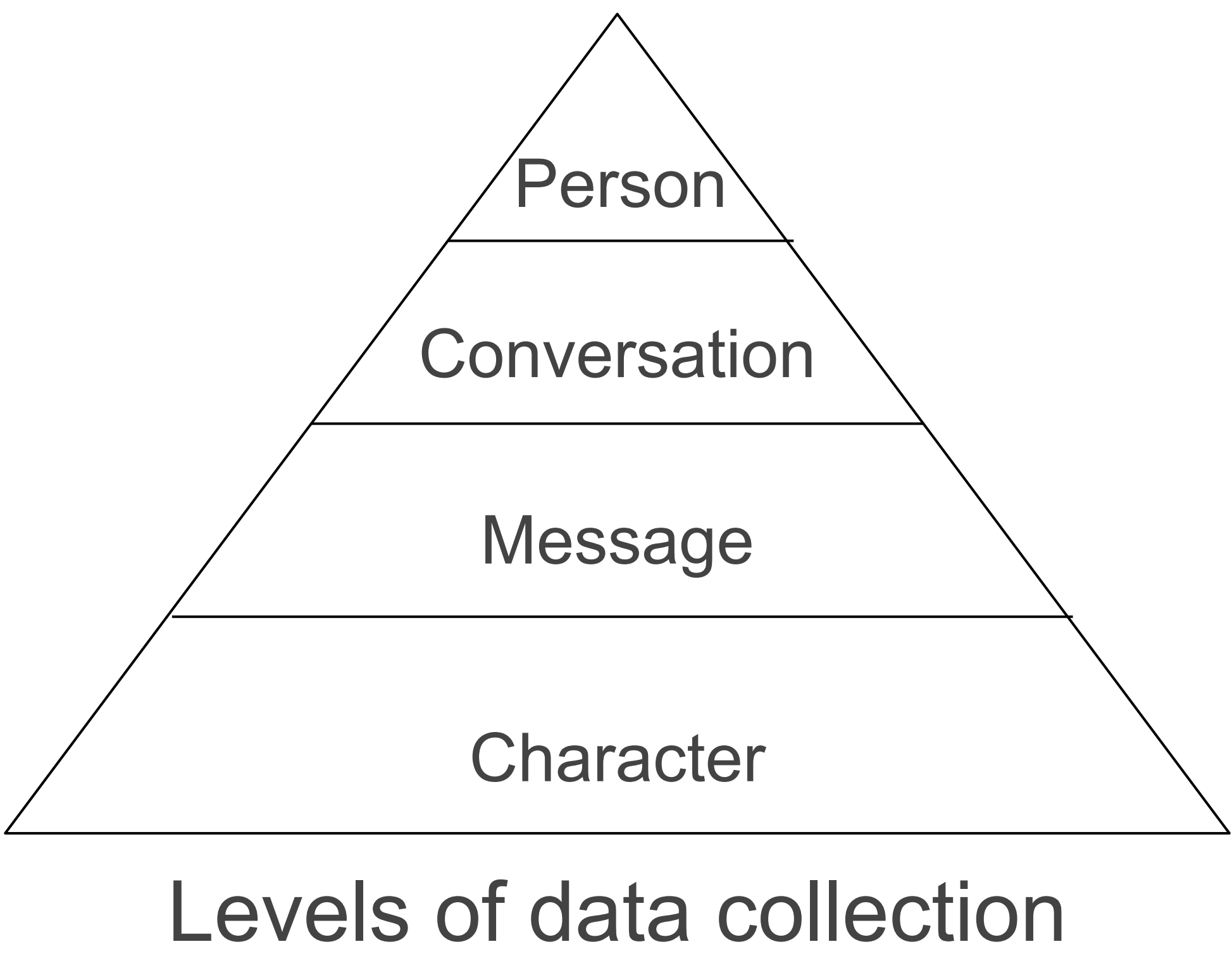
- Emphasis on textual data: SMS & keystrokes
- Both historical and real time collection
- Offers four levels of data granularity
- On-device processing of lexical features offers increased privacy
- Fork of the AWARE Framework



Privacy Features

- Lexical features calculated on-device, avoiding the need to collect sensitive raw text
 - Several lexica are included with AWARE-Text
 - Custom measures may be added
- Post-processing scripts add additional privacy
 - Replace potentially sensitive entity mentions with generic tokens
 - The RAPIDS package can calculate aggregate features, removing identifying information

	Raw or Lexical Features	Retrospective Data	Received Messages	Works with any app
SMS	✓	✓	✓	
Keystrokes	✓			✓



Case Study

- AWARE-Text has been used in one study
- Compared predictive accuracy of text sources
- It showed that SMS is a promising data source, with results comparable to Facebook

	Facebook	SMS
Age	.68	.45*
Gender†	.91	.80*
Depression	.36	.29
Life Satis.	.21	.14
Stress	.21	.18



<https://github.com/TTRUCurtis/aware-text>