

1 LOST IN TRANSLATION: TRANSLATING GENERATION
2 Z INTERNET SLANG USING MACHINE LEARNING

3 A Special Problem Proposal
4 Presented to
5 the Faculty of the Division of Physical Sciences and Mathematics
6 College of Arts and Sciences
7 University of the Philippines Visayas
8 Miag-ao, Iloilo

9 In Partial Fulfillment
10 of the Requirements for the Degree of
11 Bachelor of Science in Computer Science by

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17 January 28, 2025

Abstract

19 Internet slang is an informal variation of language that is prominent to the younger
20 generation. The usage of this language brought generational divide between them
21 and the older generations. This study aims to develop a translation tool leveraging
22 Large Language Models (LLMs) to bridge this issue. A dataset of Generation
23 Alpha slang sentences and their formal equivalents will be used to fine-tune an
24 existing LLM. The model will be trained to translate slang sentences into formal
25 English, and will be compared against the baseline model using various evaluation
26 metrics. The study highlights the significance of addressing communication gaps
27 and provides insights into how technology can enhance understanding and reduce
28 miscommunications across generations. This research contributes to the broader
29 discourse on language adaptation and generational communication in the digital
30 age.

31 **Keywords:** Internet Slang, Generation Alpha, Generational Divide,
LoRA, LLM

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Chapter 1

Introduction

1.1 Overview

Language is how humans communicate and express themselves (?). It evolves, adapting to the changing needs of users (?). New words are borrowed or invented (?), and most linguistic changes are initiated by young adults and adolescents (Thump, 2016 as cited in (?)). This demographic tends to focus on belonging to self-organized groups of peers and friends, forming what can be described as the "we" generation. Through their interactions, language changes differently, making them remarkably distinct from previous generations.

Slang is a great example of the dynamic nature of language. Slang is an informal language used by people in the same social group (?). It serves multiple social purposes: identifying group members, communicating informally, and opposing established authority (?). Slang is highly contextual and pervasive, even in non-standard English. Its figurative nature and how it twists the definitions of the words used make it difficult for outsiders to understand.

In recent years, the Internet has become a significant medium for the evolution and spread of language, giving rise to 'Internet slang' (?). Internet slang is a collection of everyday language forms used by various online groups (?). Ujang et al. (2018, as cited in (?)) state that internet slang is not easily understood by people outside the social group or people who are not fluent in the language where the slang is used. This phenomenon is particularly prominent among the younger generation (?), where they use it to communicate and interact with friends.

67 Generation Z, individuals born between 1996 and 2009, are regarded as "digital
68 natives" because technology is an integral part of their upbringing (?, ?). Even the
69 language of this generation is greatly affected by technology, where newly coined
70 terms and phrases, called Gen Z slang, are tied to the media culture they've grown
71 up with (?, ?). However, this evolution of language often creates communication
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73 limited exposure to social media may struggle to understand the prevalent slang
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75 These gaps highlight the need for a tool that can bridge the generational di-
76 vide, making it easier for individuals to understand the language of Generation Z.
77 Multiple studies have tried translating slang into a formal language using machine
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84 building on these studies, this study proposes to create a translation tool
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86 (LoRA) to a selected Large Language Model (LLM). The results will be evaluated
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88 By fostering mutual understanding, this tool aims to promote more effective
89 and harmonious interactions across age groups, ultimately enhancing relationships
90 and reducing miscommunication. 0

91 The main contributions of this study are as follows:0

92 enhance linguistic understanding between generations through using fine-
93 tuning a LLM to translate Gen Z slang to formal language, leveraging the
94 strengths of advanced NLP techniques0

95 bridge communication gaps between generations using the proposed model
96 to foster better relationships0

97 create a scalable framework that can be adapted to translate slang in other
98 languages0

99 1.2 Problem Statement0

100 Internet slang fosters informal, relatable communication within the younger gen-
101 eration (?, ?), especially Generation Z, but it presents challenges in understanding
102 for people outside this demographic. The gap in comprehension with older genera-
103 tions widens as internet slang evolves, often leading to miscommunication affecting
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112 the most diverse slangs compared to other generations. The creation of this tool
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114 the generational divide between them and older people, especially teachers. 0

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127 To evaluate the performance of the trained model and compare it to the
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527 study may aid educators, parents, and communication professionals in bridging
528 inter-generational communication gaps and fostering better understanding across
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532 Appendix A0

533 Introduction0

534 A.1 Overview0

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 557 natives" because technology is an integral part of their upbringing (?, ?). Even the
 558 language of this generation is greatly affected by technology, where newly coined
 559 terms and phrases, called Gen Z slang, are tied to the media culture they've grown
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561). Furthermore, studies show that even within Generation Z, people with
 562 limited exposure to social media may struggle to understand the prevalent slang
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564 These gaps highlight the need for a tool that can bridge the generational di-
 565 vide, making it easier for individuals to understand the language of Generation Z.
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 579 and reducing miscommunication. 0

580 The main contributions of this study are as follows:0

581 enhance linguistic understanding between generations through using fine-
 582 tuning a LLM to translate Gen Z slang to formal language, leveraging the

583 strengths of advanced NLP techniques0
584 bridge communication gaps between generations using the proposed model
585 to foster better relationships0
586 create a scalable framework that can be adapted to translate slang in other
587 languages0

588 A.2 Problem Statement0

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591 for people outside this demographic. The gap in comprehension with older genera-
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603 the generational divide between them and older people, especially teachers. 0

604 A.3 Research Objectives0

605 A.3.1 General Objectives0

606 This study aims to fine-tune the zephyr-7b Large Language Model (LLM) for use
607 in the translation of Generation Z internet slang used by Filipinos in social media.
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611 fering contexts and its formal translation0

612 To create a Low Rank Adaptation (LoRA) implementation for fine-tuning
613 an existing model0

614 To fine-tune an existing LLM to translate sentences containing Generation
615 Z slang into formal sentences0

616 To evaluate the performance of the trained model and compare it to the
617 based model using several performance metrics0

618 A.4 Scope and Limitations of the Research0

619 This study will focus on the usage of internet slang by Filipino Generation Z,
620 with an emphasis on English language since it is widely use on different digital
621 platforms such as social media. 0

622 A.5 Significance of the Research0

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629 Appendix B0

630 Introduction0

631 B.1 Overview0

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725 Appendix C0

726 Introduction0

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821 Appendix D0

822 Introduction0

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917 Appendix E0

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1064 strengths of advanced NLP techniques0
1065 bridge communication gaps between generations using the proposed model
1066 to foster better relationships0
1067 create a scalable framework that can be adapted to translate slang in other
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1086 F.3.1 General Objectives0

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1088 in the translation of Generation Z internet slang used by Filipinos in social media.
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1096 Z slang into formal sentences0

1097 To evaluate the performance of the trained model and compare it to the
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1099 F.4 Scope and Limitations of the Research0

1100 This study will focus on the usage of internet slang by Filipino Generation Z,
1101 with an emphasis on English language since it is widely use on different digital
1102 platforms such as social media. 0

1103 F.5 Significance of the Research0

1104 The study contributes to understanding the evolving linguistic landscape shaped
1105 by internet slang, especially as used by Generation Z. Insights gained from this
1106 study may aid educators, parents, and communication professionals in bridging
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1109 Appendix G0

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