PRONAVIGATOR

AI-POWERED SALES ASSISTANT

BUILT FOR INSURANCE

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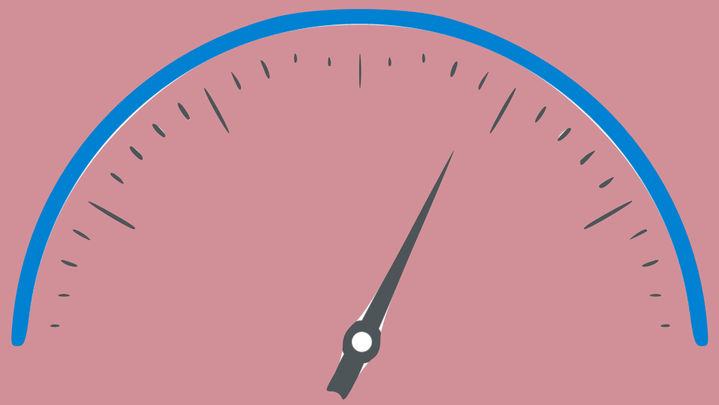
WE ARE LIVING IN A DIFFERENT ERA



SPEED + CONVENIENCE

MISSION:

Be the world’s leading conversational AI platform between customers and Insurance companies!

MESSAGING HAS EXPLODED

60B
DAILY

Monthly active users for the top four social networks and messaging apps

Source: companies, BI Intelligence

63.9%

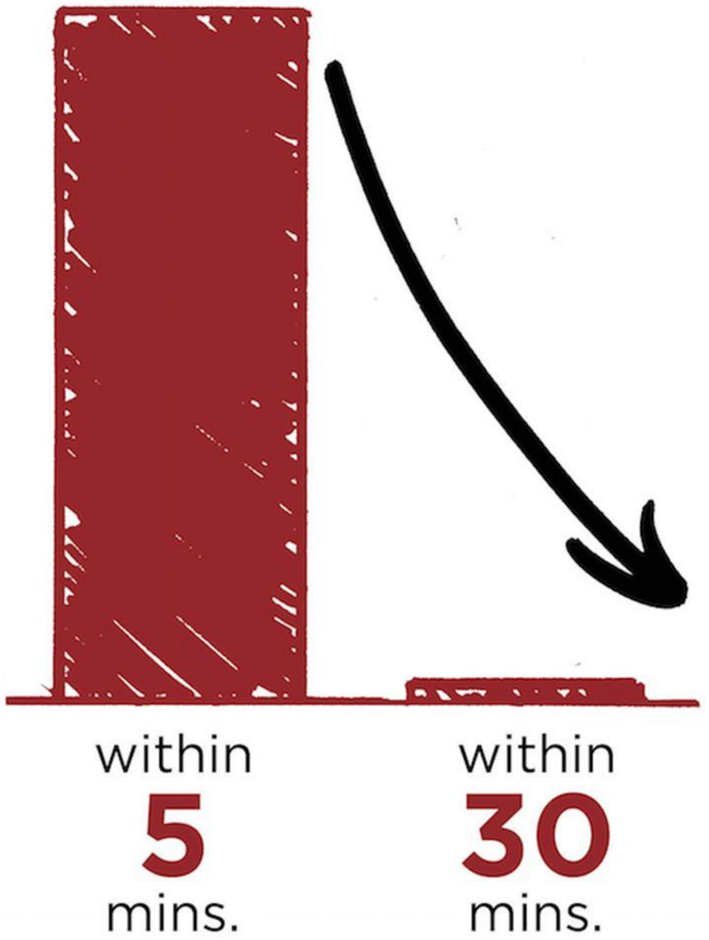
Consumers say businesses should be available to message

Would rather use Chat than a Phone Call to contact a business

49.4%

Customers are starting to prefer messaging as their go-to channel for communicating with businesses

IMPACT OF RESPONDING QUICKLY



10X RULE

SOURCE: DR. JAMES OLDROYD (2007)

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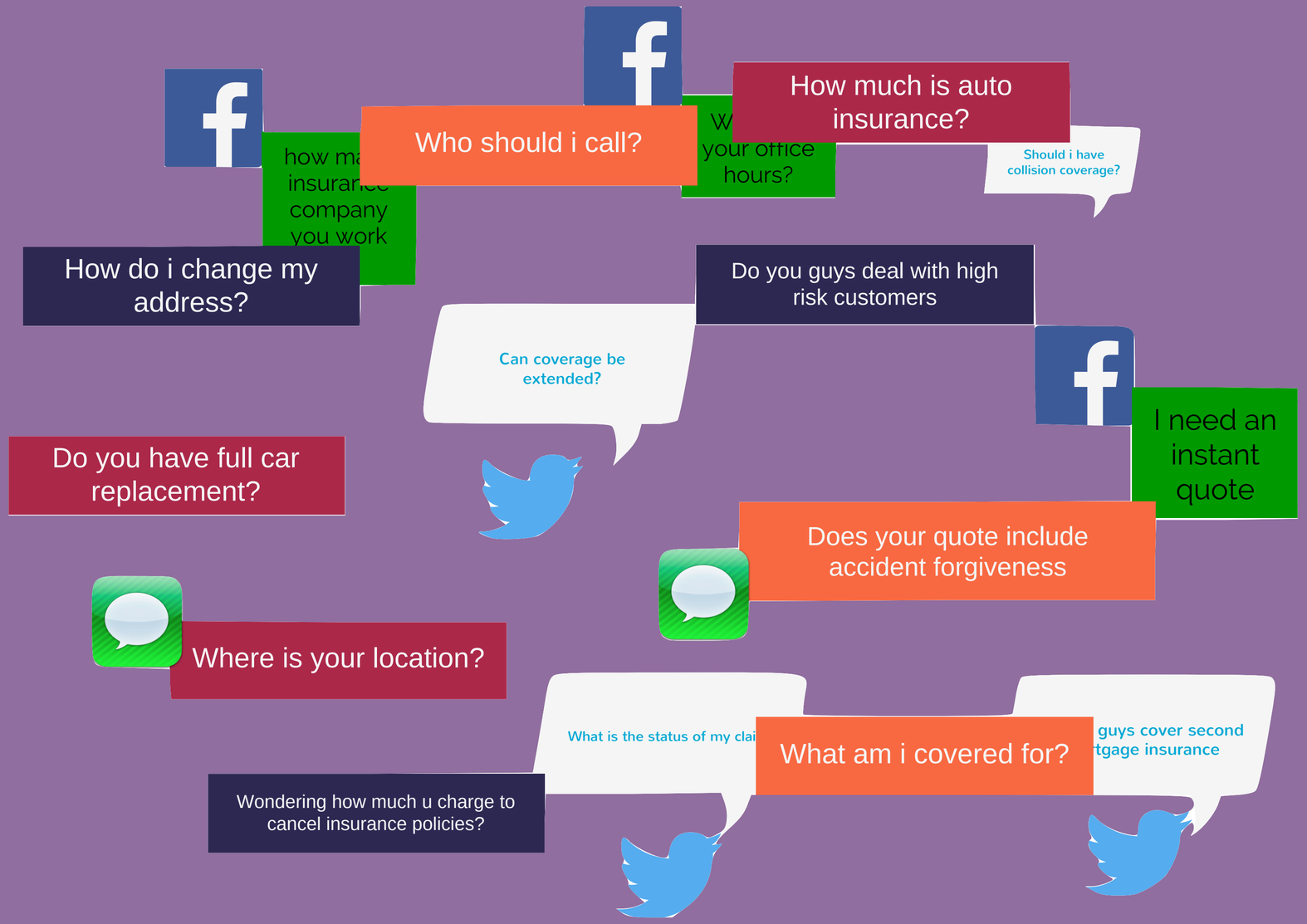
HOW DO YOU SCALE MESSAGING



$4

per Chat

$6-20

per Phone

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MAJOR HISTORICAL WORK ERA'S

HUNTER-GATHERER

AGRICULTURAL

INDUSTRIAL

INFORMATION

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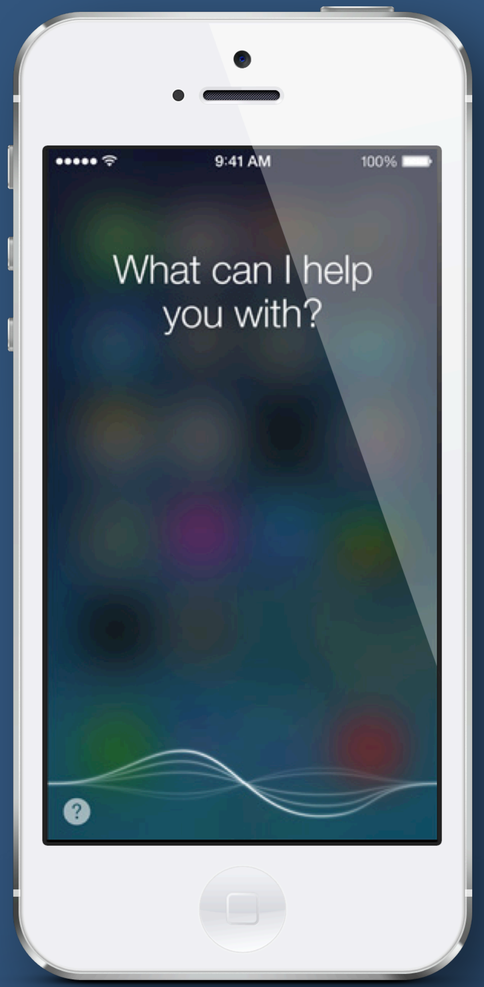
AUGMENTED AGE



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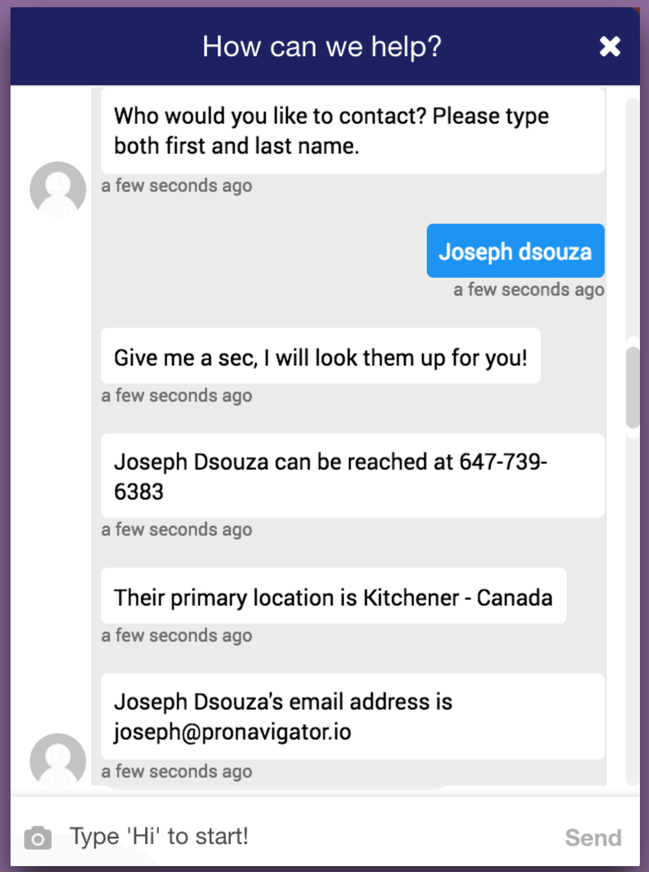
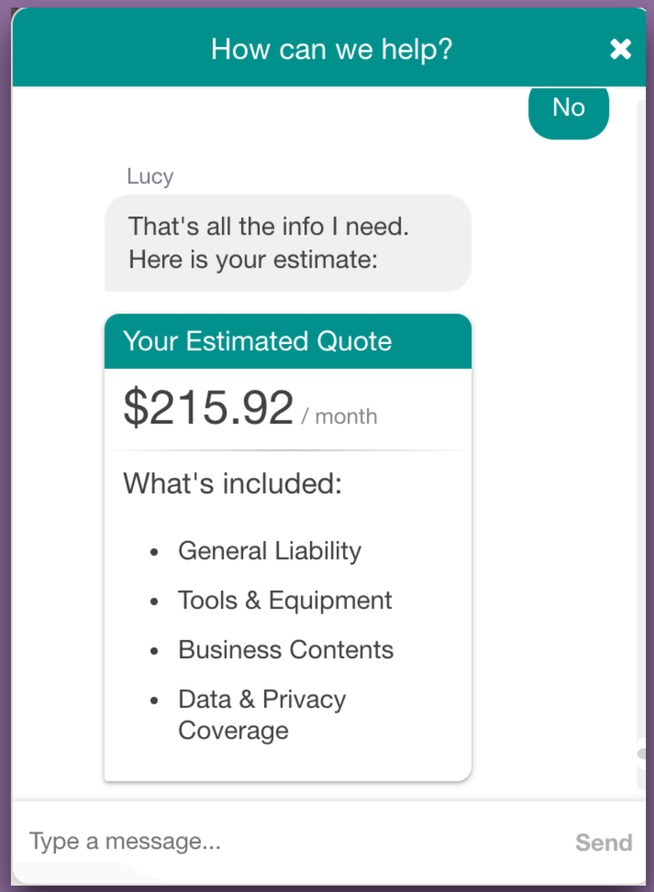
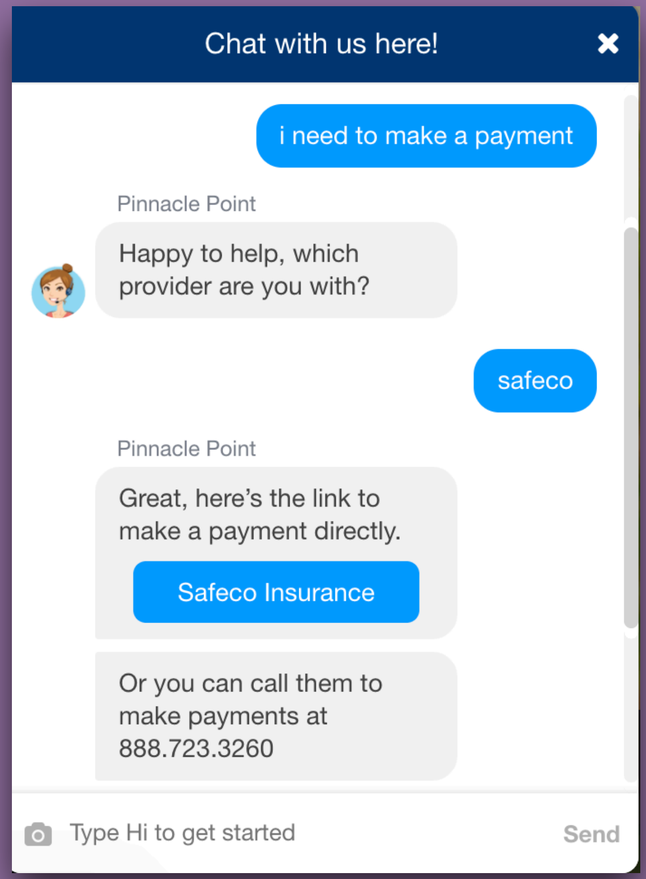
LEVERAGE AI AND CHATBOTS





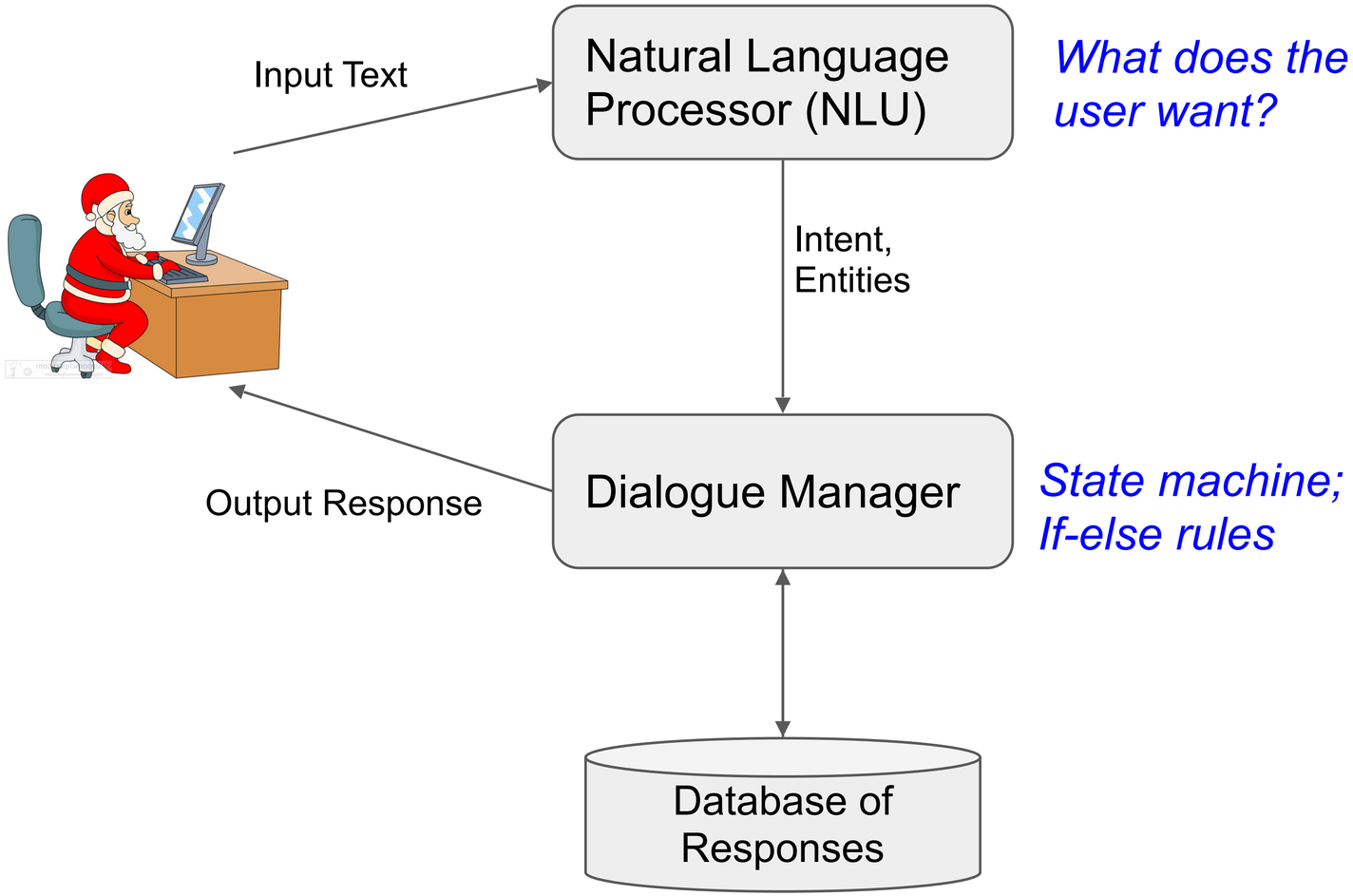


Use Chatbots to Qualify Leads, Deflect Tickets and Increase Customer Satisfaction

Natural Language Understanding (NLU) for Dialogue Systems

Nabiha Asghar
Ph.D. student @ UW
Data Scientist @ ProNavigator

What's a dialogue system?



Natural Language Understanding

What is the intent of a text?

> *"I want an auto insurance quote"* (intent = get_quote)
>
> vs.
>
> *"Do you sell policies outside Canada?"* (intent = FAQ_location)

What are the useful entities in a text?

> *"I want car insurance"*
>
> vs.
>
> *"I want home insurance"*

Intent Classification

Input: “*Do you provide auto insurance in Ontario?*”

Output: one element from the set *{get_quote, get_contact_info, FAQ_location, FAQ_eligibility, …. }*

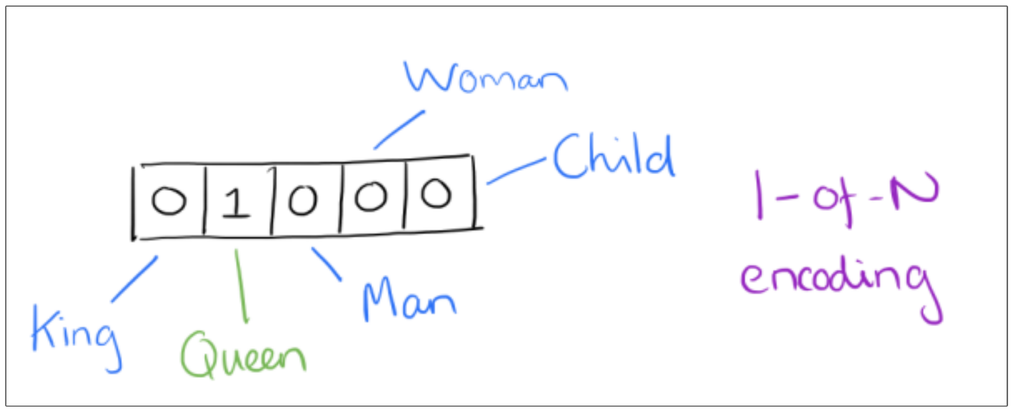
Named Entity Recognition (NER)

Input: “*Do you provide auto insurance in Ontario?*”

Output: For each word in input, produce an element from the set *{NULL, insurance_type, province_name, person_name, number, date, …. }*

Intent Classification &
Named Entity Recognition (NER)

Key Idea: Model a sentence as a sequence of ‘word vectors’ (Word2Vec, GloVe)



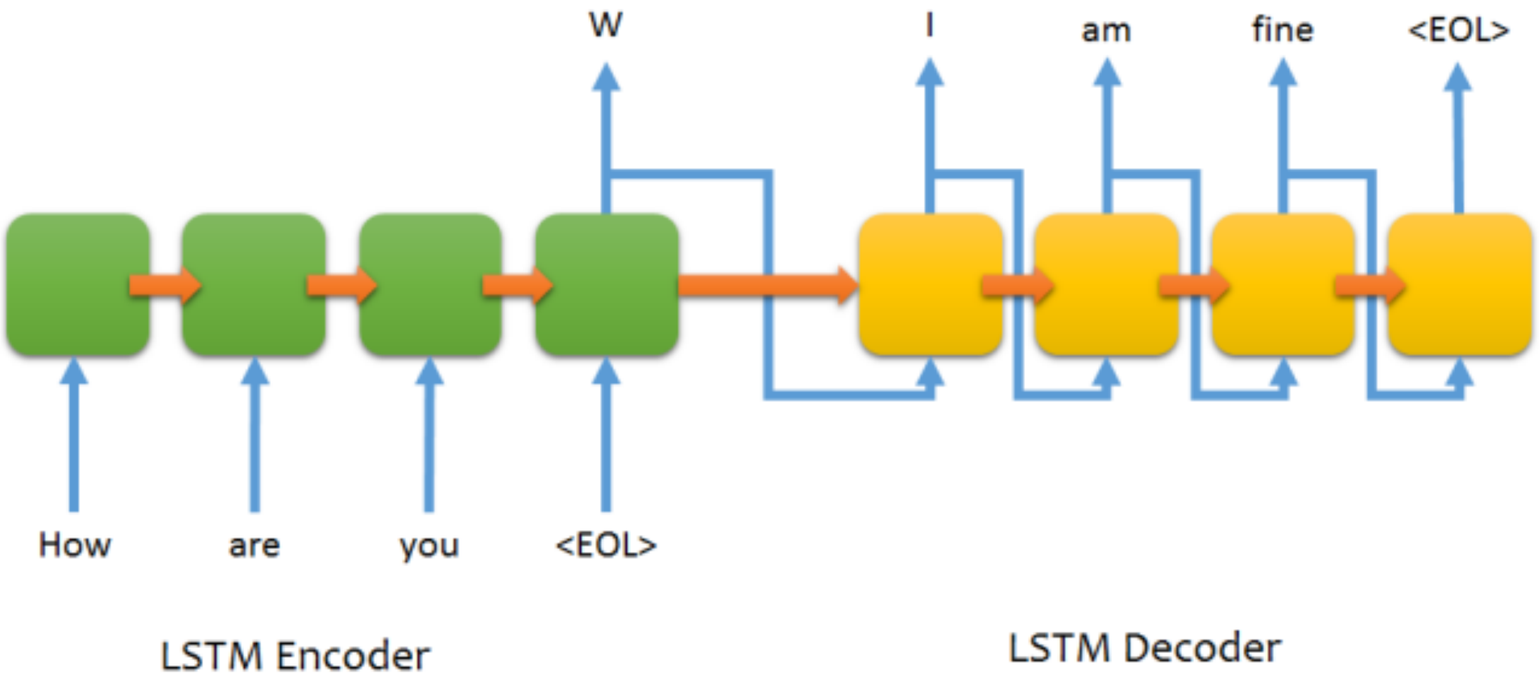
One-hot encodings of words

Word vectors

Features: Word Vectors

Classification Algorithms: Conditional Random Fields, SVMs, etc

Text Generation using Recurrent Neural Networks



Some Key Research Challenges

- Develop hybrid retrieval-generative approaches
- Online active learning [1]
- Generate emotionally appropriate responses [2]
- Email auto-response generation
- Transfer Learning across multiple Insurance verticals (e.g. Home vs. Auto)
- Voice Support
- Multi-language support
- … and many more!

[1] Nabiha Asghar, Pascal Poupart, Xin Jiang, Hang Li. Deep Active Learning for Dialogue Generation. Proceedings of the 6th Joint Conference on Lexical and Computational Semantics (*SEM), Vancouver, August 2017.
[2] Nabiha Asghar, Pascal Poupart, Jesse Hoey, Xin Jiang, Lili Mou. Affective Neural Response Generation. Proceedings of the 40th European Conference on Information Retrieval (ECIR), Grenoble, France, March 2018.

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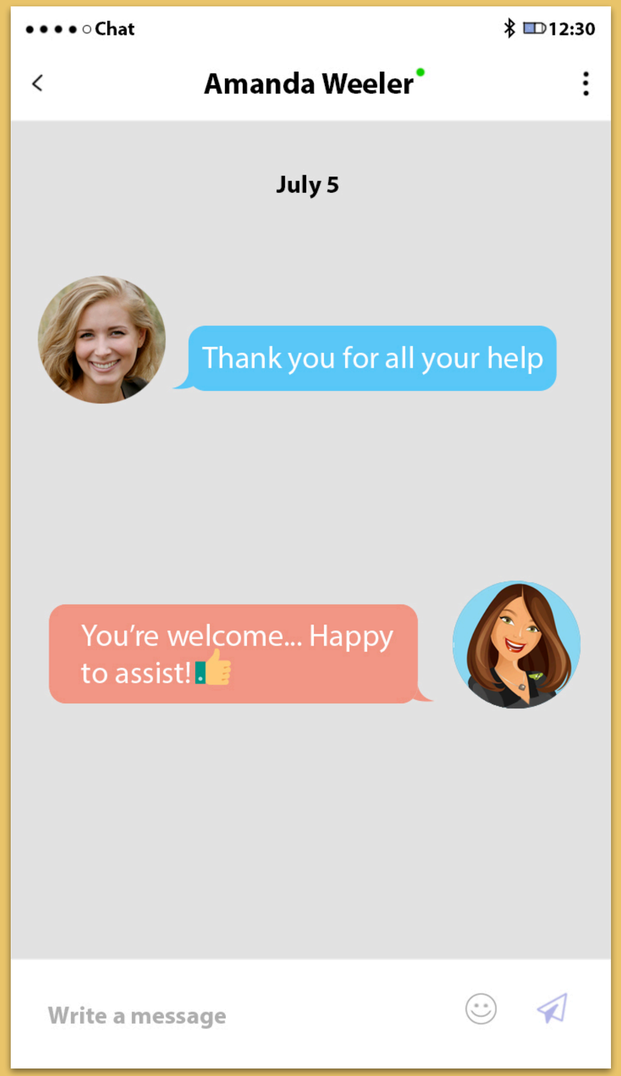
"THANKS"



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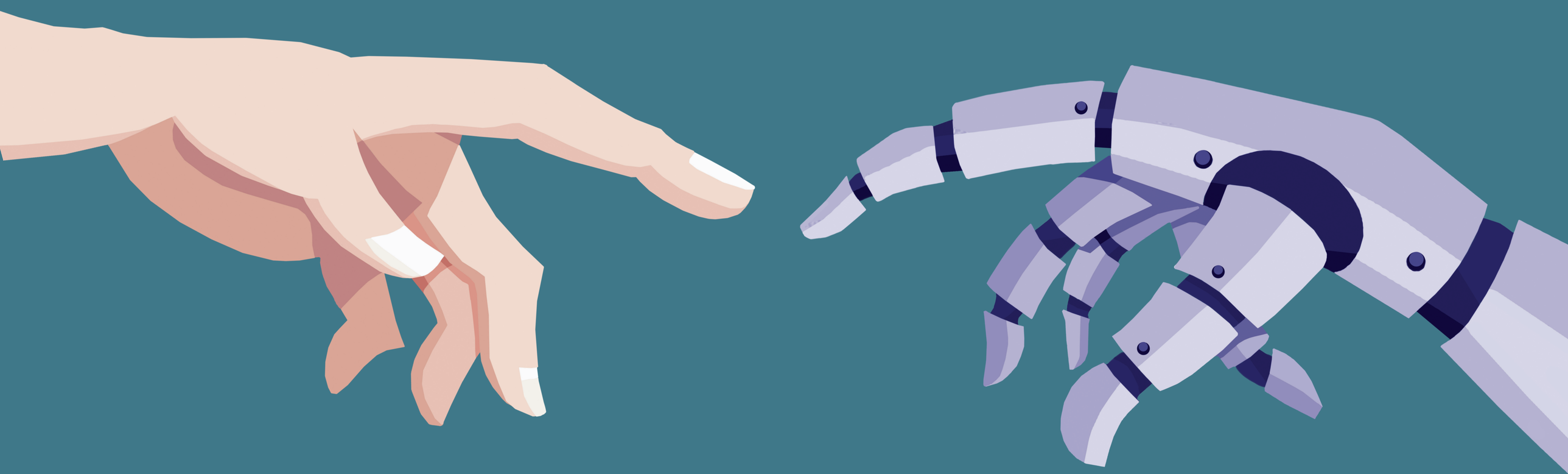
HUMANIZING TECHNOLOGY



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WE ARE HIRING

JOB POSTING ON WATERLOO WORKS

or Email

contact@pronavigator.io