Automatically responding to customers

February 5, 2019

Table of Contents

1. Introduction

2. Preliminaries

3. Benchmarking

4. Improving accuracy

5. Conclusions

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Research question 1
Research question 2

Table of Contents

1 Introduction
- Research question 1
- Research question 2

2 Preliminaries

3 Benchmarking

4 Improving accuracy

5 Conclusions

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Research question 1
Research question 2

Existing benchmarks

- Braun et al.
- Snips (next slide)
- Burtsev et al.
- Botfuel

Snips entity recognition
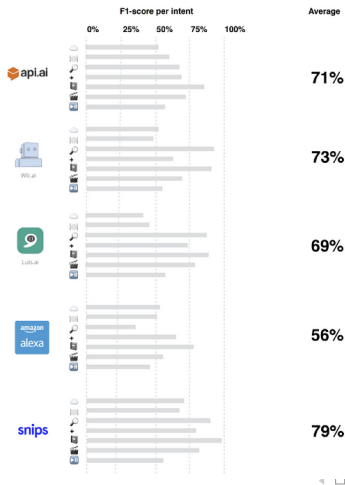
Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Research question 1
Research question 2

Results according to Snips

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Research question 1
Research question 2

Question and goal

- Can an open-source NLU benchmarking tool be created?
- Develop such a tool.

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Research question 1
Research question 2

Improving accuracy

How hard can it be?

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Research question 1
Research question 2

Question and goal

- Can accuracy for NLU be increased?
- Improve the accuracy

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Natural language processing

Table of Contents

1. Introduction

2. Preliminaries
   - Natural language processing
   - Deep learning

3. Benchmarking

4. Improving accuracy

5. Conclusions

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Natural language processing

Description of NLP field

- Extract meaningful information from
  - Text
  - Speech
- Generate text

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Natural language processing

Well-known NLP tasks

- Machine translation
- Speech recognition
- Named-entity recognition
- Intent classification

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Natural language processing

Well-known NLP tasks

- Machine translation
- Speech recognition
- Named-entity recognition
- Intent classification

What is [London's](location) weather [tomorrow](date)?

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Natural language processing

Well-known NLP tasks

- Machine translation
- Speech recognition
- Named-entity recognition
- Intent classification

What is [London's](location) weather [tomorrow](date)?

get_weather

Table of Contents

Table of Contents

1. Introduction

2. Preliminaries

3. Benchmarking

4. Improving accuracy

5. Conclusions

Introduction
Preliminaries
Benchmarking
Improving accuracy
Conclusions

Research question 1
Research question 2

Table of Contents

Research question 1

Research question 2