Team TRANSform
Hello!

We are QAD’s capstone team:

Andrew Luo, Norman Chung, Ryan Siu, Simon Kim, Troy Lee
QAD is a leading provider of adaptable, cloud-based enterprise software for global manufacturing companies.
Ryan is a customer service rep.

He is made aware of a customer dispute while on the phone.
Problems:

ERP application is large in size and can be difficult to navigate

Noisy work from home environment
Solutions:

Adding a virtual assistant for easier access and efficiency
Simon is a sales representative.
Time Comparison

Current UI:
- Intuitive to filter, but takes some time to enter the correct dates ~ 30 seconds

Voice Assistant:
- Faster speed ~ 15 seconds
50 Sales Representatives Saving

5 minutes Per day Saves a company...

1000 hours Every year
Architecture

Technologies Used:

- NGINX
- React
- Rasa
- Duckling
- Action Server
- User
- Google Compute Engine
- HTTP
- socket.io
NLP Architecture

Pipeline:

Natural language command → WhitespaceTokenizer → RegexFeaturizer → LexicalSyntacticFeaturizer → CountVectorsFeaturizer → DIETClassifier → ResponseSelector → DucklingExtractor → Intent & entities
- intent: create_action_request

examples:
- Create a new action request for [customer](contact_type) [10C1003](customer_id)
- Create action request for [customer](contact_type) [31C9239](customer_id)
- Create action request
### Scalable Training

**CI/CD with Rasa X:**

<table>
<thead>
<tr>
<th>Sentence</th>
<th>Intent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a sales order</td>
<td>create_sale_order</td>
</tr>
<tr>
<td>Create a sales order for customer P01111</td>
<td>create_sale_order</td>
</tr>
<tr>
<td>Start a new sales order for customer P931111</td>
<td>create_sale_order</td>
</tr>
<tr>
<td>Edit action request P0133323</td>
<td>update_action_request</td>
</tr>
<tr>
<td>Edit action request P3215555</td>
<td>update_action_request</td>
</tr>
<tr>
<td>Can you make a sales order for customer P9C899</td>
<td>create_sale_order</td>
</tr>
<tr>
<td>Change a sales order</td>
<td>update_sale_order</td>
</tr>
<tr>
<td>Update the customer on sales order P9010343 to P9C877</td>
<td>update_sale_order</td>
</tr>
<tr>
<td>Change sales order P321377</td>
<td>update_sale_order</td>
</tr>
</tbody>
</table>
Potential Improvements

#1. Scope of Information
At the moment, our assistant only supports only a select amount of commands.

#2. Accuracy
Training Data is not as fleshed out as it should be.

#3. Error Handling
The Assistant at the moment only responds with either the correct response or an error message.
Thanks!

Any questions?