# AD HOC REPORTS GENERATING CHATBOT FROM DB SQL QUERIES BY USING SINGLISH QUESTIONS WITH NLP

## Kasun Bebarende Guruge

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## Department of Computing

## Informatics Institute of Technology, Sri Lanka
### in collaboration with
### Robert Gordon University, Aberdeen, Scotland

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# ABSTRACT

Natural Language Processing is the intersection of linguistics, artificial intelligence and computer science and it uses in significant use cases in many domains. When it uses for enterprise level applications, it is a major area to use as Neural Machine Translation. There are several studies on Neural Machine Translation to translate some written sentences to another usable format. Therefore, NLP to SQL query generation has huge amount of several studies by researchers all over the world. Even though, same model can't be used for other research to perform same database interaction in the SLAF context with contextual bottlenecks. As well as SLAF has more than 300 database schemas for different software projects, and all of them are very critical due to the data privacy. This study is going through two main things with varies concerns. The first one is to train the model to generate SQL queries considering the data privacy.

The second and last part, the research focuses on an interactive user-friendly screen to data receival. it's supposed to generate a web link to show the output, therefore anyone can share the link and interact with a simple chatbot, but as the first step it's not suitable to share the link publicly, therefore this app will only be working at KIOSK that is situated in very secure area of the camp.

The software has been tested by different knowledge groups and concluded all the responses and other issues to one problem, it was this application is not much sophisticated enough to answer every questions accurately, due to the model is not versatile enough to convert all kind of questions into SQL queries, because the model has certain limitation like, can't generate the complex SQL queries, and also the generated reports are not very much interactive and related. However, these issues, limitations were emphasized and fully described under the future development at later chapters with some mitigation ways that not feasible to implement here with this project's time scope.

Keywords—military, sensitive databases, chatbot, NLP, deep learning