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MÉMOIRE

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Thème

IMPLEMENTATION OF AN INTELLIGENT CHATBOT FOR CUSTOMER
SUPPORT IN ROAD SUPPORT ON-DEMAND APPLICATION

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Soutenu le : **03/07/2023** devant le jury composé de :

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ABSTRACT

With the emergence of on-demand application, many sectors changed due to their quick service and easy-access and The road support is no exception. With the development of on-demand road support applications linking stalled users with towing-trucks providers and mechanical assistants, consequently, the integration of a chat bot as a virtual assistant answering a user's concerns about the car's mechanical problems will improve the efficiency and further optimise the user's experience.

This thesis, will follow the steps needed to implement a virtual assistant using semantic search model.

Key words: Virtual Assistant, Chatbot, Semantic Similarity, NLP, Transformers, Sentence Transformers.

Avec l'émergence des applications sur demande, de nombreux secteurs ont changé en raison de leur accès rapide et facilité d'utilisation. Le soutien routier ne fait pas exception, avec le développement d'applications de soutien routier à la demande reliant les utilisateurs en panne avec les fournisseurs de remorqueurs et les assistants mécaniques. Par conséquent, l'intégration d'un bot de chat en tant qu'assistant virtuel répondant aux préoccupations des utilisateurs concernant la panne de voiture et les problèmes mécaniques permettra d'améliorer l'efficacité et d'optimiser encore l'expérience utilisateur.

Cette thèse, suivra les étapes nécessaires pour implémenter un assistant virtuel en utilisant un modèle de recherche sémantique.

mot clés: Assistant Virtuel, Chatbot, Similitude Sémantique, NLP, Transformers, Transformers de Phrases.

ملخص

ظهور التطبيقات عند الطلب غير العديد من القطاعات نظرا لسرعتها و سهولة الوصول إليها. مجال دعم الطرق ليس باستثناء، حيث تم تطوير تطبيقات تربط المستخدمين العالقين بمقدمي شاحنات القطر والمساعدين الميكانيكيين. بالتالي، فإن دمج روبوت الدردشة كمساعد افتراضي يجيب على مخاوف المستخدم بشأن تعطل السيارات والمشاكل التقنية سيحسن من كفاءة هذه التطبيقات و يضمن جودة تجربة المستخدم. ستبغ هذه الأطروحة الخطوات اللازمة لتنفيذ مساعد افتراضي باستخدام نموذج بحث دلالي.

كلمات مفتاحية: مساعد افتراضي، روبوت دردشة، التشابه الدلالي، معالجة اللغة الطبيعية، المحولات، محولات الجملة.

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DEDICATION

I sincerely dedicate this work to :

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NLP Natural Language Processing.

POS Part Of Speech .

CNN Convolutional Neural Network.

RNN Recurrent Neural Network .

LSTM Long Short-Term Memory.

STS Semantic Search Similarity.

NER Named Entity Recognition.

BERT Bidirectional Encoder Representations from Transformers.

SBERT Sentence BERT.

KNN K-Nearest Neighbor.