

Manipal Academy of Higher Education

**Impressions@MAHE**

---

Manipal Institute of Technology, Manipal  
Theses and Dissertations

MAHE Student Work

---

Summer 7-1-2020

## **Data Analytics of a SaaS B2B Conversational AI**

Rohit Bhardwaj

Follow this and additional works at: <https://impressions.manipal.edu/mit>



Part of the [Computer Sciences Commons](#)

---

## **Data Analytics of a SaaS B2B Conversational AI**

Customer service is transforming according to Industrial Revolution 4.0. Artificial Intelligence has gained access to tasks that can be automated and carried out more efficiently than humans. As companies have scaled up across continents, they can now provide customer support 24\*7 via Natural Language Processing through bots that are capable to perform tasks like lead generation, intent recognition, sentiment analysis, and even transferring the chat to a human agent when it is not confident to answer the customer's query. For intent discovery, several techniques have been researched on and a complete intent recognition pipeline has been built which is independent of the business domain. To measure the performance of the bot, certain metrics like Customer Satisfaction Score, Coverage, Precision, Automation Percentage etc are calculated. Hypotheses are derived from the metric scores and actionable insights are planned to ameliorate them. With the intent recognition pipeline, developer efficiency increased from a week to 1-2 days to push new intents into production. Metrics are evaluated to enhance performance of the bot cut-tailored to a client-specific manner.

[Information systems]: Information systems applications - Decision support systems - Data analytics; Information retrieval - Document representation - Document topic models, Information retrieval query processing - Query intent, Query suggestion, Retrieval tasks and goals - Information extraction, Clustering and classification, Business intelligence [Computing methodologies]: Machine learning - Learning Paradigms - Unsupervised learning- Cluster analysis, Topic modeling, Dimensionality reduction and manifold learning, Machine learning approaches - Factorization methods - Latent Dirichlet allocation