

Open Source Offerings

- Rasa

- Framework for building task oriented dialog systems
- Rasa is not for building a chit chat bot
- Provides all the modules of a conversational agent individually so only those which are needed can be incorporated
- Models provided by Rasa if needed
- Main job is to provide sample conversations to train the model
- Possible to use custom models for one or more modules

- DeepPavlov

- Multiple pre-trained models implementing each module in a conversational agent
- Pre-trained NLP models, pre-defined dialog system components and pipeline templates
- Framework for implementing and testing dialog models
- Tools for integration with other platforms such as messengers, helpdesk software
- Model benchmarking platform
- Some conversational datasets provided
- DeepPavlov Agent
 - Models for each module and conversational agent pipeline
 - Framework for building multi-skill agents, meaning there can be several parallel chatbots for different skills
- DeepPavlov Dream
 - Conversational agent built with DeepPavlov Agent and Dialog Flow Framework

- Multi-skill agent in which all the chatbots share the same dialog state

- Facebook ParlAI

- Similar to DeepPavlov
- Also has framework for training and testing dialog models
- Has projects in which full systems have been implemented

- Mycroft

- Framework for building multi-skill dialog systems
- Text-to-speech, wake word listener, NLU, speech-to-text models
- Mycroft voice assistant can run even on devices like a Raspberry Pi

- Open Dialog

- Platform for full conversational agent design and implementation

- Cisco MindMeld

- Provides models for NLU and Dialog Management, Question Answering
- Provide methods for custom knowledge base creation
- Training data collection and management support

- ConvLab-2

- Toolkit to build task oriented dialog systems
- Contains models for NLU, Dialog State Tracking, Word-Level Dialog State Tracking, Dialog Policy, NLG, Word-Level Policy, User Policy End-to-End agents

- Tools for evaluation of systems and analysis of weak points
- Facebook BlenderBot
 - Largest Ever Open Domain Chatbot (9.4B parameters)
 - Made for research purposes
- Tock
 - Platform to build conversational AI
 - Can choose which components to embed
 - Standalone bots or integrated with other applications
 - Provides NLU by integrating models from OpenNLP, StanfordNLP, Rasa, Spacy, etc.
- Uber Plato
 - Platform for building, training, evaluation and deploying conversational AI agents
 - Meant for research applications and creation of prototypes and demo systems
 - Facility for conversational data collection
 - Can be used to train pre-trained models for different components in an online (with interactions) or offline (with data) fashion.
- Nvidia NeMo
 - Framework to build and train GPU accelerated dialog models
 - Models for ASR , NLU, Text to speech
 - Can train custom model or use an inbuilt, pre-trained model

Offerings from Companies

- Google Dialogflow
 - Natural Language Understanding platform
 - Used to design and integrate a conversational user interface into another platform to provide an engaging way for users to interact with a product
- Facebook [Wit.ai](https://www.wit.ai)
 - NLU platform
 - Framework to train NLU by giving sample utterances and specifying corresponding intent
- IBM Watson
 - Watson assistant
 - Task oriented agent
 - Little to no flexibility
 - Watson NLU
 - General NLU tool to gain insights from text data
 - Not specific for conversational agents
 - Watson also has speech to text and text to speech
 - Watson knowledge studio
 - Platform to train models to adapt them to a specific domain
 - But models can only be used with other IBM Watson products
 - Watson language translator
 - Watson natural language classifier
 - Can classify user utterance into domains and intents
 - Can also answer questions and route skills
- Amazon Lex

- Platform for ASR and NLU
 - Context aware system which tracks conversation context
 - Ability for multi-turn conversations
 - Integration with AWS cloud functionality
- Microsoft Bot Framework
 - LUIS NLU system
 - Question answering model
 - Speech to text and text to speech services

Offerings for Enterprise Conversational AI

- <https://www.gartner.com/reviews/market/enterprise-conversational-ai-platforms>

Comparison of Different Offerings done by Gartner

- Gartner magic quadrant for conversational AI - <https://kore-wordpress.s3.us-east-2.amazonaws.com/wp-content/uploads/2022/05/16155529/Gartner-Magic-Quadrant-MQ.png>
- <https://www.gartner.com/reviews/market/conversational-platforms>