

Build a Virtual Agent in JavaScript with Twilio Autopilot and IBM Watson Natural Language Understanding

—

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Hi, I'm Dave

I'm a developer advocate for IBM in San Francisco. I also help organize:

- The SF JavaScript Meetup
- IBM Developer SF Meetup
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I participate in meetups, hackathons, webinars and write articles about technology for IBM and other organizations.

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Agenda

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Why Chatbots?



Projected market for chatbot technologies, 2024

\$9 . 4B

Source: [Business Insider](#)

Chatbot Compound Annual Growth Rate in North America

Source: [Business Insider](#)

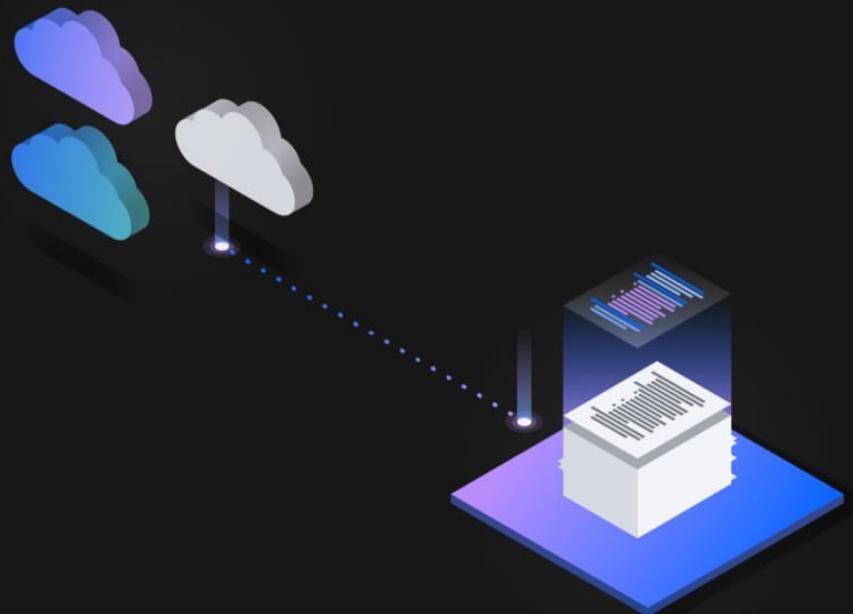
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Why Chatbots?

"Technologies such as artificial intelligence, IoT, and APIs, among others, are evolving at a rapid speed. Chatbots are integrated with these technologies to offer enhanced operations, thereby driving market demand. Artificial intelligence and audio speech-based chatbots are expected to account for the largest market share in future." -*Grand View Research*



Introduction to NLP

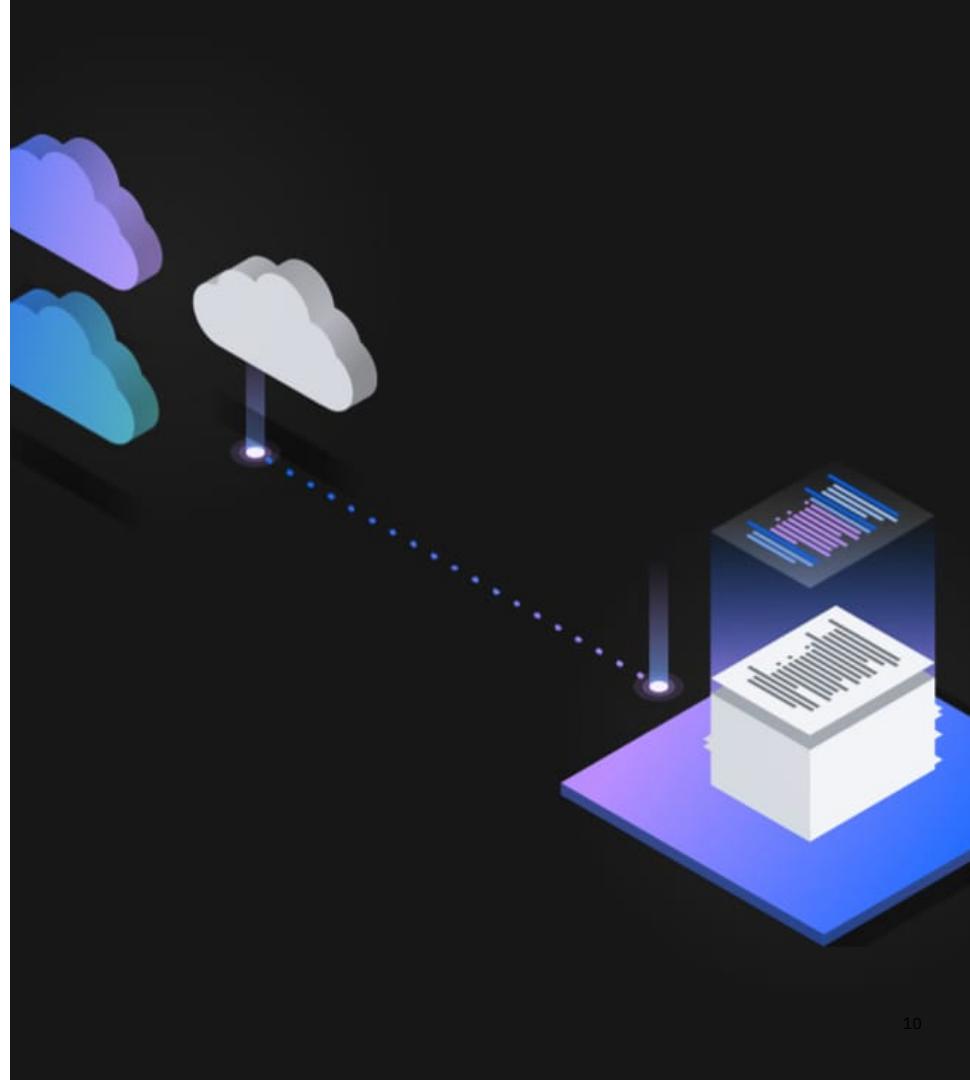


What is NLP?

Natural Language Processing, usually shortened as NLP, is a branch of artificial intelligence that deals with the interaction between computers and humans using the natural language.

The ultimate objective of NLP is to read, decipher, understand, and make sense of the human languages in a manner that is valuable.

Most NLP techniques rely on machine learning to derive meaning from human languages. [[source](#)]



Introduction to Naïve Bayesian Classifiers

In statistics, Naïve Bayes classifiers are a family of simple "probabilistic classifiers" based on applying Bayes' theorem with strong (naïve) independence assumptions between the features. They are among the simplest Bayesian network models. But they could be coupled with Kernel density estimation and achieve higher accuracy levels.

Naïve Bayes classifiers are highly scalable, requiring a number of parameters linear in the number of variables (features/predictors) in a learning problem. Maximum-likelihood training can be done by evaluating a closed-form expression, which takes linear time, rather than by expensive iterative approximation as used for many other types of classifiers.

Three Smart Concepts

Watson
NLP

Twilio
Autopilot

Naive
Bayesian
Classifier

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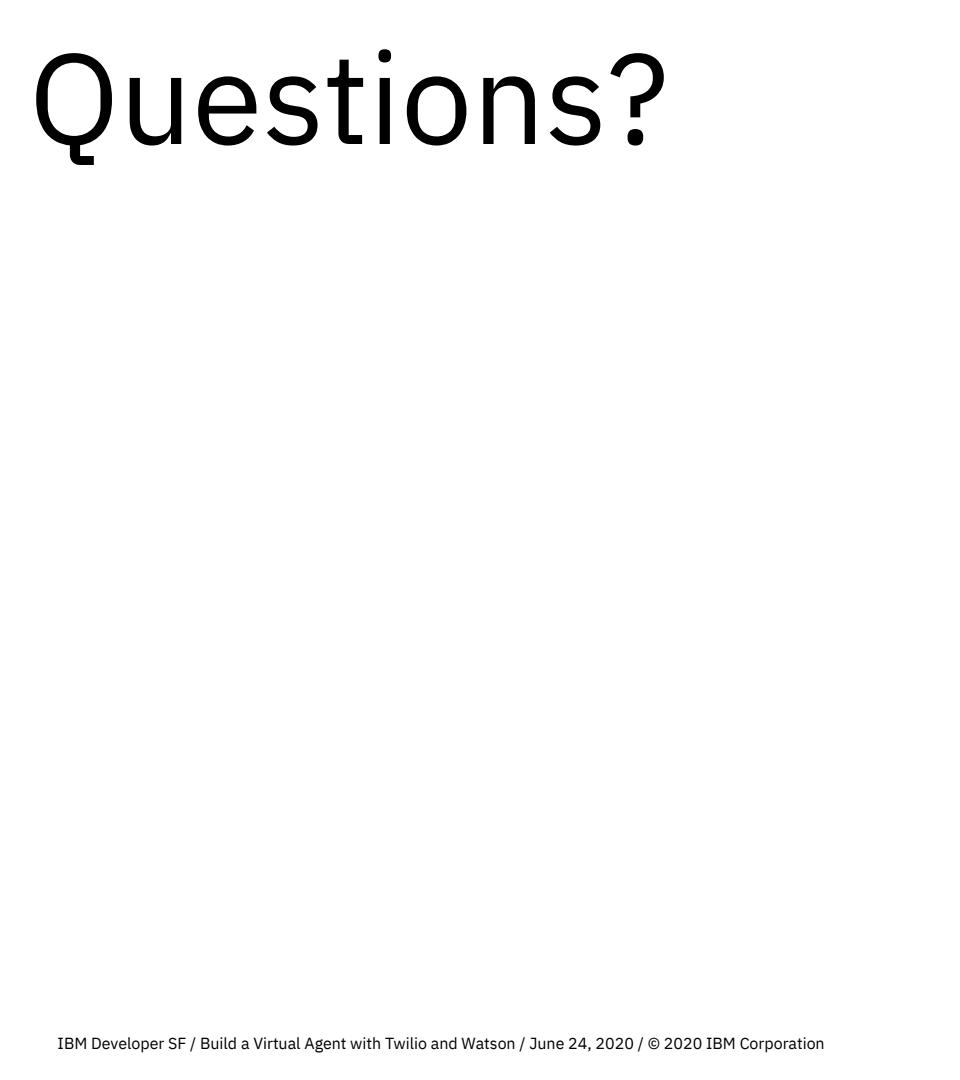
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Questions?



And... answers!

