

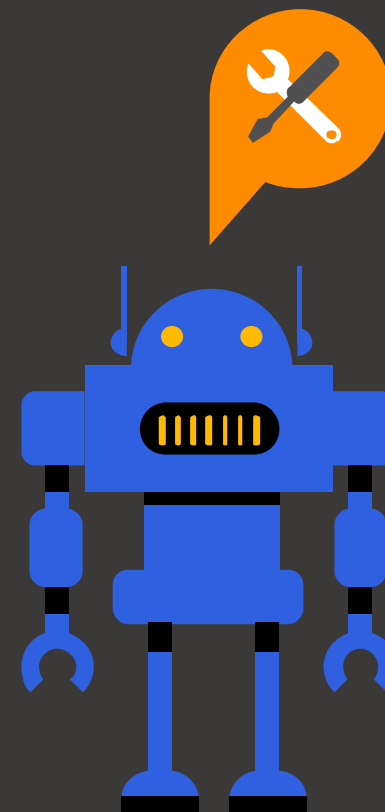


Hands on: Microsoft Bot Framework and Cognitive Services

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Technical Evangelist

 @alyssaong1337



Microsoft Bot Framework

Bot Framework Components

Bot Builder SDKs



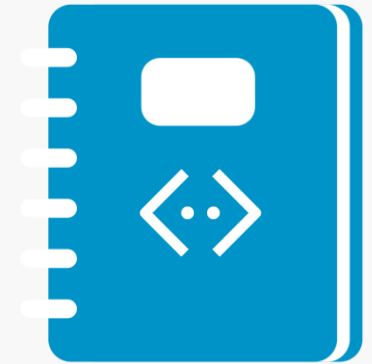
Build great dialogs within your Node.js- or C#-based bot

Bot Connector



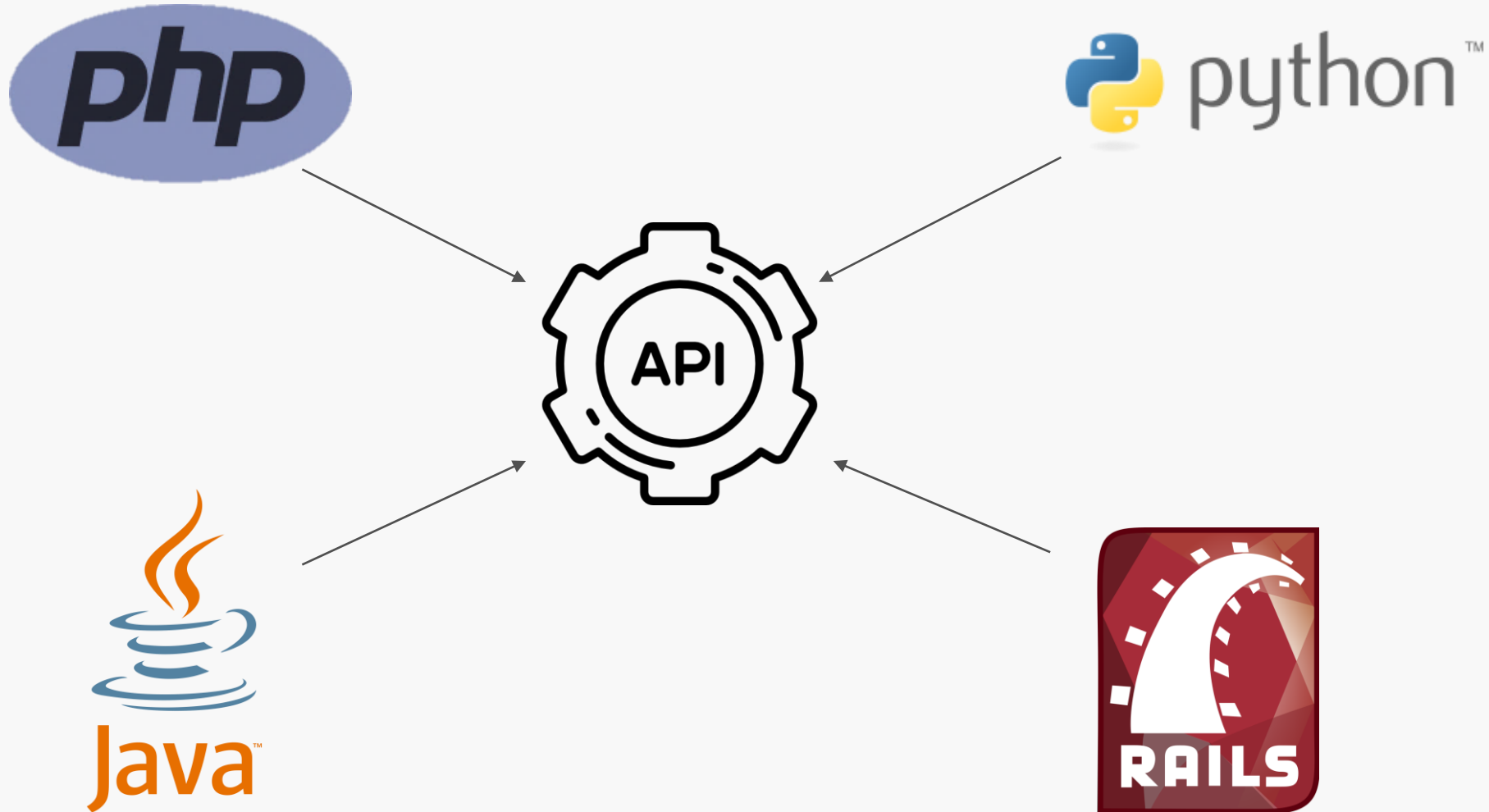
Connect your bot to sms, Office 365 mail, Skype, Slack, etc.

Bot Directory

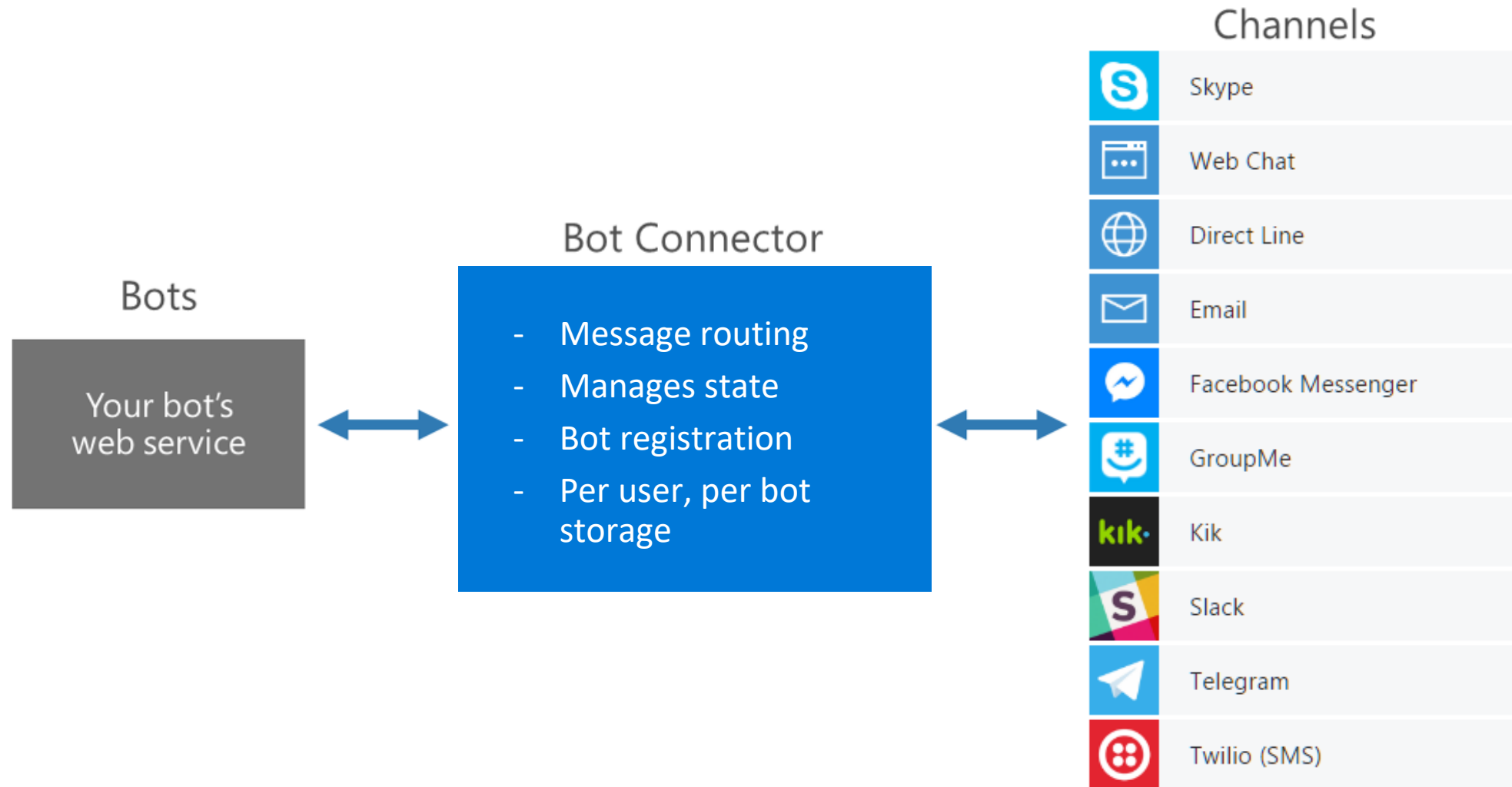


Publish bots and try others on the bot directory

No C# or Node? No problem!



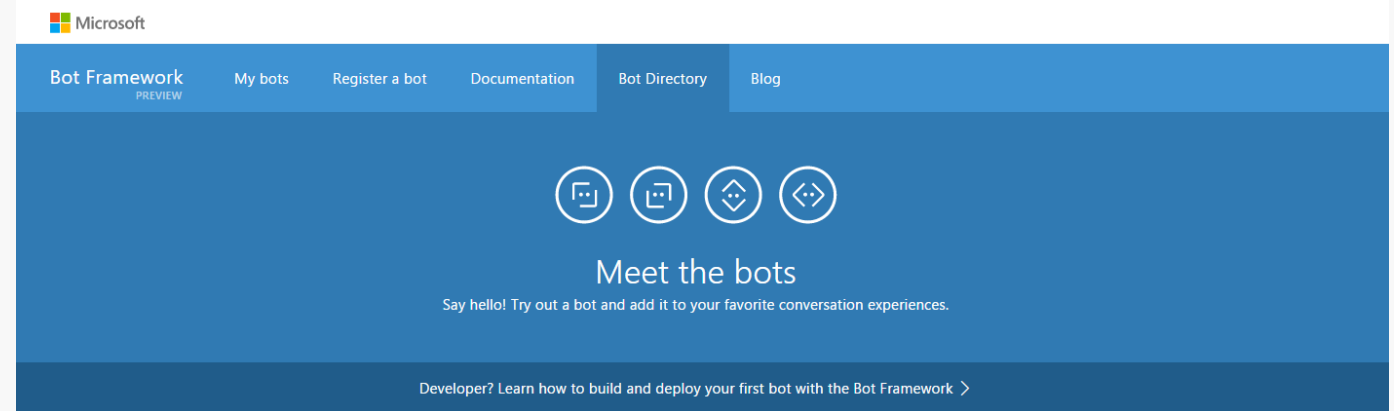
Bot Connector


















Bot Directory

Public Directory of Bot Framework Bots

- Submit yours
- Search engine
- Discover and try



Featured bots

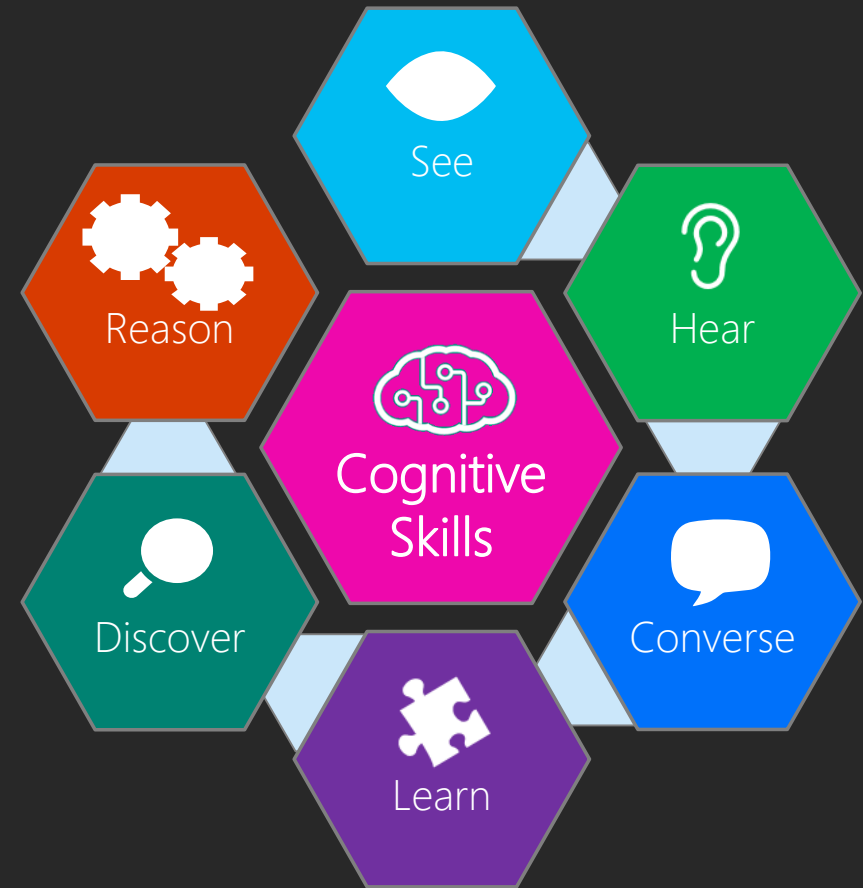
	Skyscanner Skyscanner The world's travel search engine		Spock Massively Chat with Spock, second in command of the USS Enterprise, to		Hipmunk Hipmunk, Inc. Hi, hi! I'm a super-powered travel assistant Hipmunk who can dig
	StubHub StubHub Inc. Your ticket out. Find tickets for shows, games and concerts with		Jessie Humani PullString, Inc. Jessie Humani's life is in your hands. Will you help her make some		Poker Bot Phong Cao Let's play Texas hold 'em poker!
	RemitRadar RemitRadar Artificial Intelligence remittance assistant chatbot. Helps you to find		Foursquare Foursquare Labs Inc. Search Foursquare for the best Food, Nightlife, and Attractions nearby or		Your Face Microsoft Will provide a frank assessment of your face. Powered by Microsoft
	MemeCat Microsoft They told me I had to sit here and make memes for humans.		Lingio Quiz+T... Lingio Play a language quiz and translate in the same chat bot. - Learn a new		Candy Escape Massively You've woken up trapped in the dungeon of the Candy Castle! Are
	Dumpus Massively Your familiar spirit waits for you in the spirit realm! Help him grow		Summarize Microsoft No time to read an entire web page? Just send a link to the Summarize		Movie Night Massively Chat with Movie Night to get showtimes, content, and invite your

Microsoft Cognitive Services

Add **Cognitive Skills**
to your Bots



Build **smarter** experiences that
delight and **engage** your users

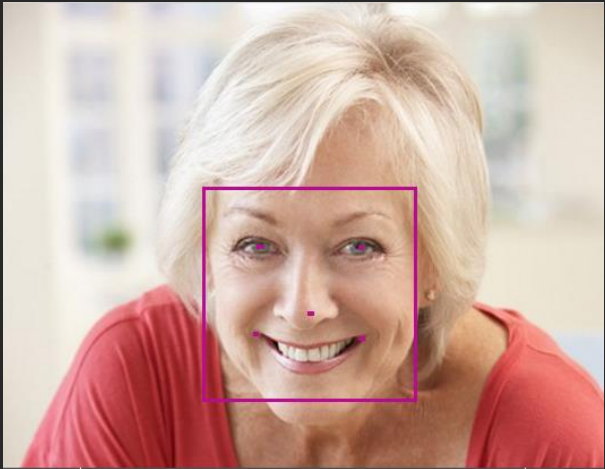
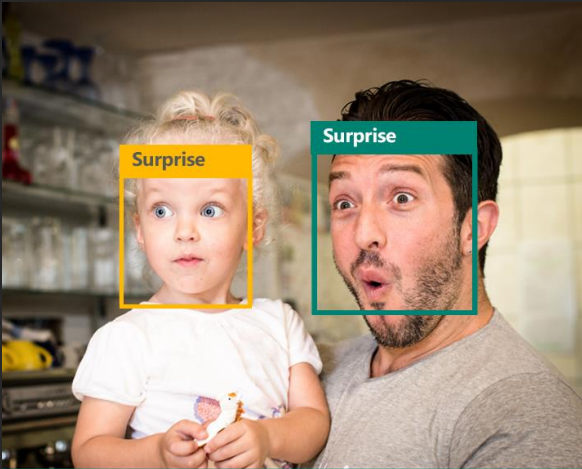


Computer Vision Skills



Distill actionable information
from images

From objects, to faces, and feelings, analyze
images and take action



Category	People; 1 face found
Adult / Racy?	False / True
Black & White?	No
Dominant colors	<div><div></div><div></div><div></div></div>
Accent color	<div><div></div></div>

Knowledge & Search Skills



Search and extract knowledge from the web or your data

Enable intelligent search experiences over your own data or the collective knowledge of the web

Microsoft Academic

machine learning

Advanced Sort: Relevance

More than 50,000 publications matching machine learning (0.80 seconds) Page 1 of 6250

Year

- ☐ 1989
- ☐ 1992
- ☐ 1993
- ☐ 1994
- ☐ 1995

See more...

Authors

- ☐ David E Goldberg
- ☐ Vladimir Vapnik
- ☐ Michael I Jordan
- ☐ J R Quinlan
- ☐ Bernhard Scholkopf

See more...

Affiliations

- ☐ Massachusetts Institute Of Technology
- ☐ Microsoft
- ☐ Carnegie Mellon University
- ☐ University Of California Berkeley
- ☐ Stanford University

See more...

Fields Of Study

- ☒ machine learning
- ☐ image segmentation
- ☐ regression analysis
- ☐ decision tree
- ☐ fuzzy set

Genetic Algorithms in Search, Optimization and Machine Learning
1989, David E Goldberg
Cited 18,910 times [View PDF](#)

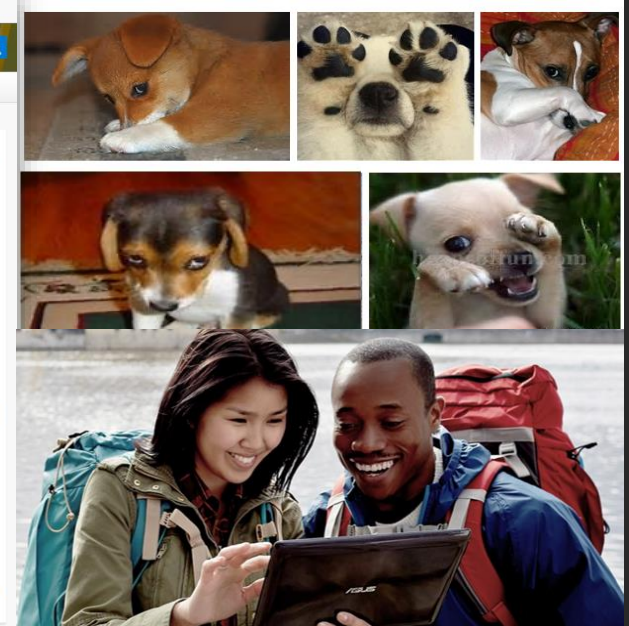
Induction of Decision Trees
1986, Machine Learning
J R Quinlan
Cited 4,819 times [View PDF](#)

Outline of a New Approach to the Analysis of Complex Systems and Decision Processes
1973, IEEE Transactions on Systems, Man, and Cybernetics, issue 1, pp 28-44
Lotfi A Zadeh (University Of California Berkeley)
[fuzzy set](#) [complex systems](#) [artificial neural network](#) [computer simulation](#)
[machine learning](#) [artificial intelligence](#) [computer science](#)
Cited 2,602 times [View Link](#)

Applied logistic regression
2000, Contemporary Sociology
David W Hosmer, Stanley Lemeshow
[computerized adaptive testing](#) [logistic regression](#) [regression analysis](#)
[statistical classification](#)
Cited 9,058 times [View PDF](#)

C4.5: Programs for Machine Learning
1993, J Ross Quinlan
Cited 7,022 times [View Link](#)

Machine Learning
Field Of Study
Publications: 305,721
Citations: 3,501,211
Top journals: pami, ieee transactions on neural networks, ml, tsmc, neco
Top conferences: cvpr, nips, icml, kdd, ismi
Subdiscipline of: computer science
Subdisciplines: artificial neural network, linear discriminant analysis, feature selection, hidden markov model, evolutionary algorithm, unsupervised learning, fuzzy control system, supervised learning, evolutionary computation, anomaly detection, concept learning, biological neural network, reinforcement learning, heuristic, temporal difference learning, intelligent control, statistical classification, computational intelligence, soft computing, statistical relational learning, recommender system, computational neuroscience, connectionism, handwriting recognition, gene expression programming, swarm intelligence, knowledge integration, data stream mining, ensemble learning, semi-supervised learning, instance-based learning, clinical decision support system, computational learning theory, conceptual clustering, automated planning and scheduling, deep learning, granular computing, intelligent character recognition, learning classifier system, learning to rank, convolutional neural network, feature learning, probabilistic classification, deep belief network, algorithmic learning theory, proactive learning, inductive programming, error-driven learning

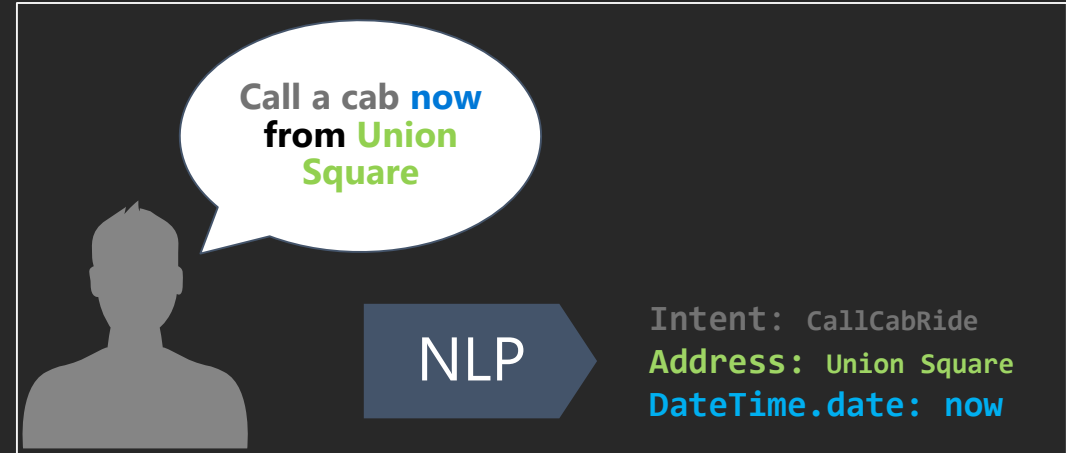


Dialog and Language Skills



Build dialogs and engage with users in a natural way

Understand and process natural language, determine users' intent, and respond with actions



Speech Skills



Hear, understand, and speak back to users

Recognize what the user said, who said it, and respond with text to spoken audio



Speech Recognition	Speaker Recognition	Text to Speech Conversion



Your team has just crash landed on Mars.



Fortunately you are all alive.

The problem is, you guys need a way to survive while the rescue team comes to save you. After a few days, you and your friends are struggling to stay civilised. You also find some unidentifiable objects around Mars that may be a threat.



Your team decides to build a bot.

The bot will help get news from civilisation for you. It will also help analyse images of unidentifiable objects that you send to it.



You have ~~one~~ three jobs

1. To set up the bot and give it a brain
2. Get news from Earth
3. Use computer vision to analyse objects on Mars



Here's what's going to happen.

We will go through Mission 1 together to get you started.

For Mission 2, you will be following the hands on labs in your teams.

And for Mission 3 – you're on your own! (with a few hints of course)



The rules:

- All members of your team must complete each mission to move on to the next
- All people on the team put your hand up when you've finished the mission
- We will do code checks at the end of every mission





[Github.com/alyssaong1/bot-framework-](https://github.com/alyssaong1/bot-framework-HOL)
[HOL](#)

