



“Chatbots will fundamentally revolutionize how computing is experienced by everybody.”

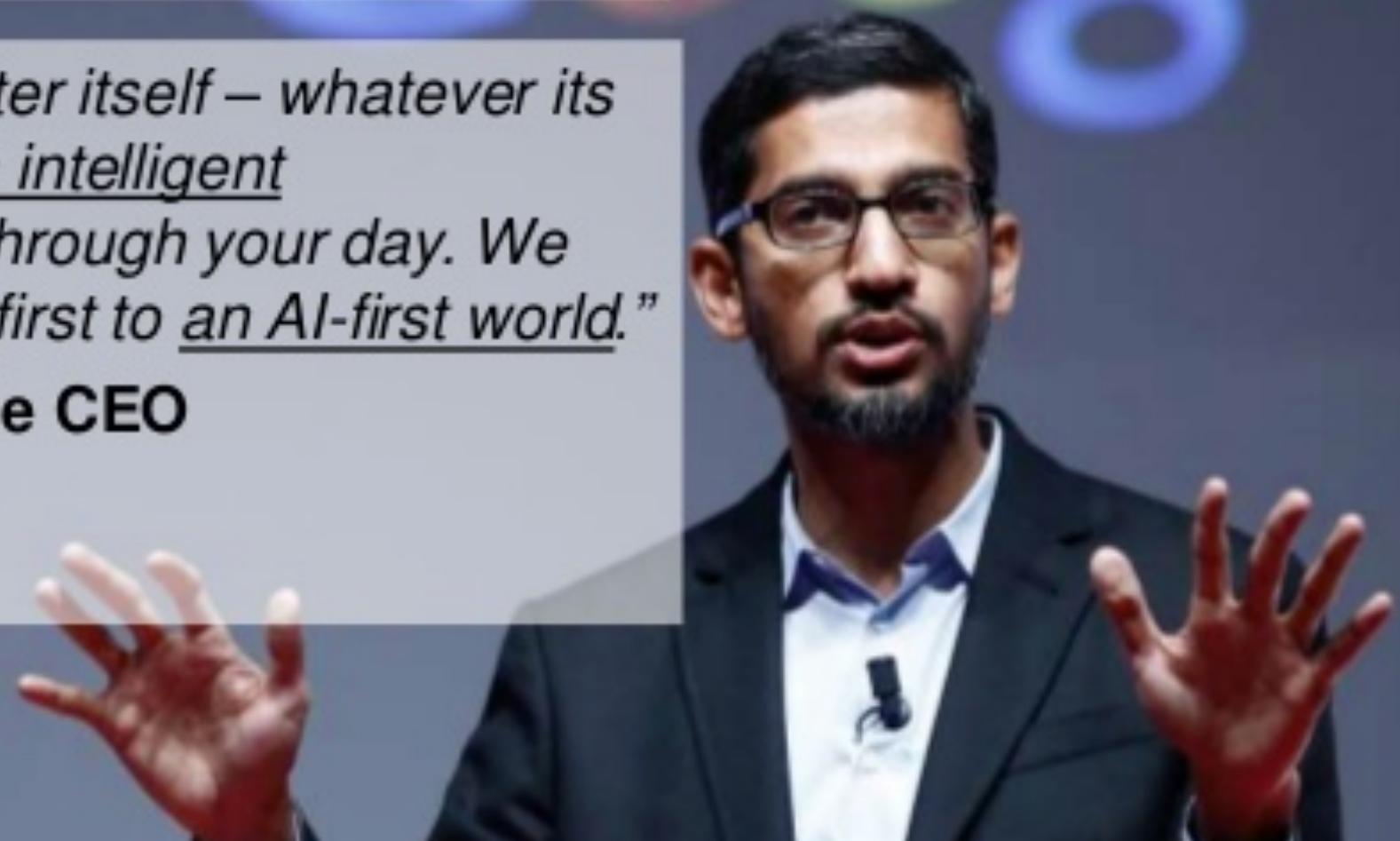
- Microsoft CEO Satya Nadella, July 2016

Artificial Intelligence Assistant Trend

“Over time, the computer itself – whatever its form factor – will be an intelligent assistant helping you through your day. We will move from mobile-first to an AI-first world.”

Sundar Pichai, Google CEO

28 April 2016





Nick Caruso
Entrepreneur & Consultant

ncaruso@gmail.com

(703) 581-8142

<http://www.linkedin.com/in/ncaruso>

The accompanying git repo is here:

<https://github.com/njcaruso/bot-nodejs-demo>

Agenda



What's a bot?



Basic Bot



YouTube Bot

Natural Language Processing



Conversations



Deployment & Wrap-up



Agenda



What's a bot?



Basic Bot



YouTube Bot

Natural Language Processing



Conversations



Deployment & Wrap-up



Hidden Slide

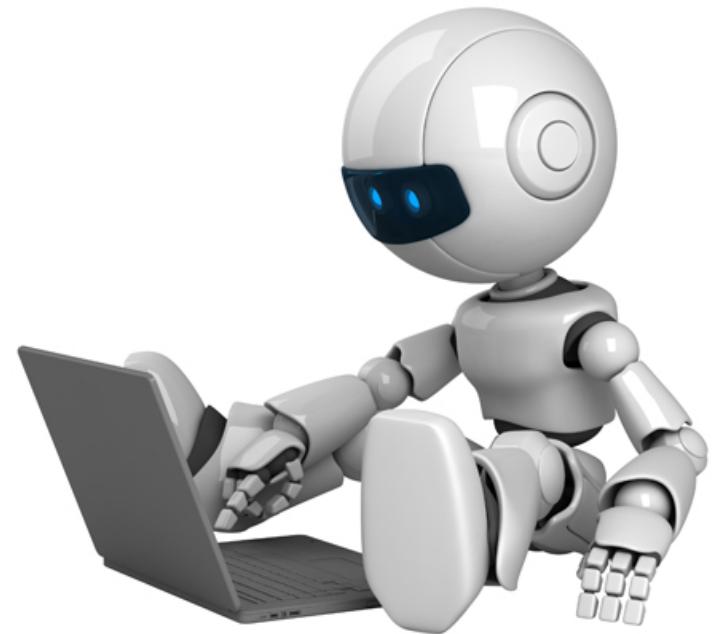
Much of the following is attributed to the below:

<https://chatbotsmagazine.com/the-complete-beginner-s-guide-to-chatbots-8280b7b906ca#.4v0kntd4n>



What's a bot?

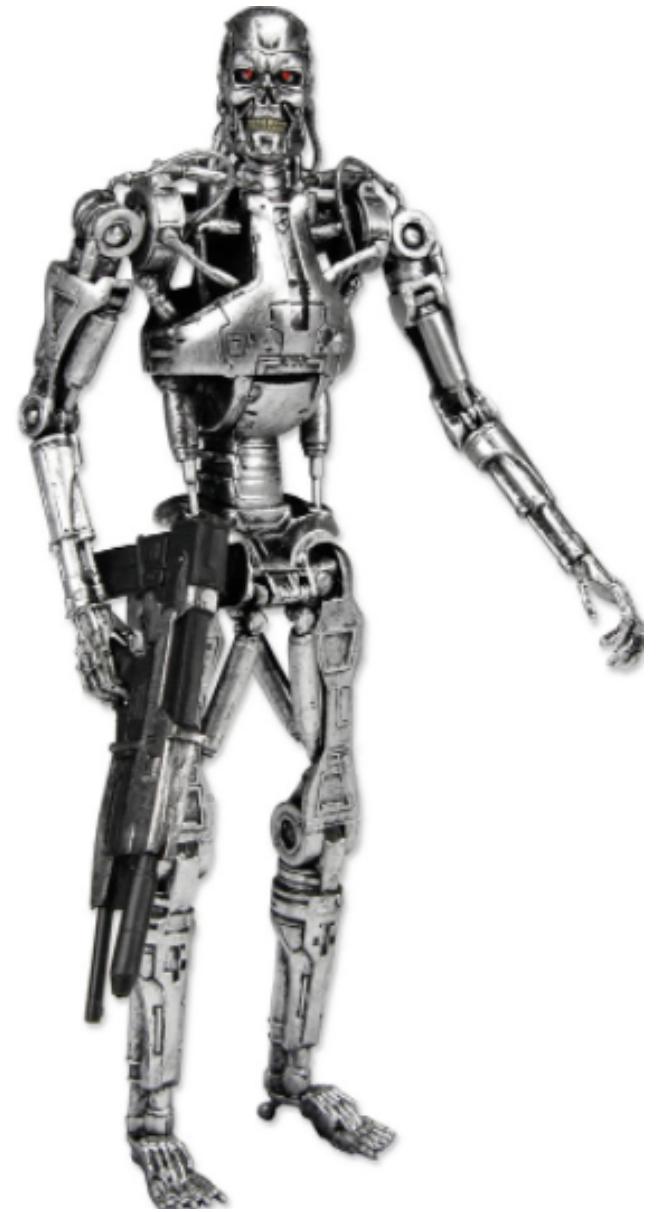
What's a “Chatbot”?



Who is the most famous Chatbot?



I suggest a new strategy,
Artoo: let the Wookie win



I'll be back!

CHATBOT ECOSYSTEM

Deployment Channels



slack



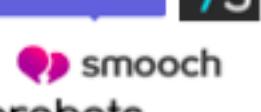
kik.



Third-party Chatbots



Enabling Technology



Native



BI INTELLIGENCE



What's a bot?



Thanks, Poncho!



Purrrrrrrrrrrrrrrrr





What's a bot?

Looking to rent an apartment?

Pasadena, MD Q Any Price ▾ Any Beds ▾ Any Baths ▾ Any Property Type ▾ More Filters ▾ Follow Search

Amenities ↗

Pool ✓ Gym/Rec. Facility + Parking + Hot Tub + In Unit Washer/Dryer + Less

Air Conditioning + Fireplace +

Hardwood Floors Energy Efficient Disability Features

Rooms Dining Laundry Family More +

Heating/Cooling Central Heat Forced Air

Stories Single Story Multi Stories

Lot Corner Lot Water View Golf Course Lot/Frontage More +

Community Comm Security Features Comm Swimming Pool(s) Comm Boat Facilities More +

Outdoor Amenities RV/Boat Parking Horse Facilities Tennis Court

Parking 2+ Car Garage 3+ Car Garage Carport



What's a bot?

Complex form or chatbot?

Pasadena, MD

Any Price+ Any Beds+ Any Baths+ Any Property Type+ More Filters+ Less

Amenities Pool Gym/Rec. Facility Parking Hot Tub In Unit Washer/Dryer
 Air Conditioning Fireplace

Inside Hardwood Floors Energy Efficient Disability Features

Rooms Dining Laundry Family More+

Heating/Cooling Central Heat Forced Air

Stories Single Story Multi Stories

Lot Corner Lot Water View Golf Course Lot/Frontage More+

Community Comm Security Features Comm Swimming Pool(s) Comm Boat Facilities More+

Outdoor Amenities RV/Boat Parking Horse Facilities Tennis Courts

Parking 2+ Car Garage 3+ Car Garage Carport

“I’m looking to rent a 2 bedroom apartment, with a pool and a nice water view. And I really want a carport.”

What % of time on **mobile** devices is spent in either email or messaging platforms?

30%

60%

90%

Too
Much



What % of time on **mobile** devices is spent in either email or messaging platforms?

30%

60%

90%

Too
Much





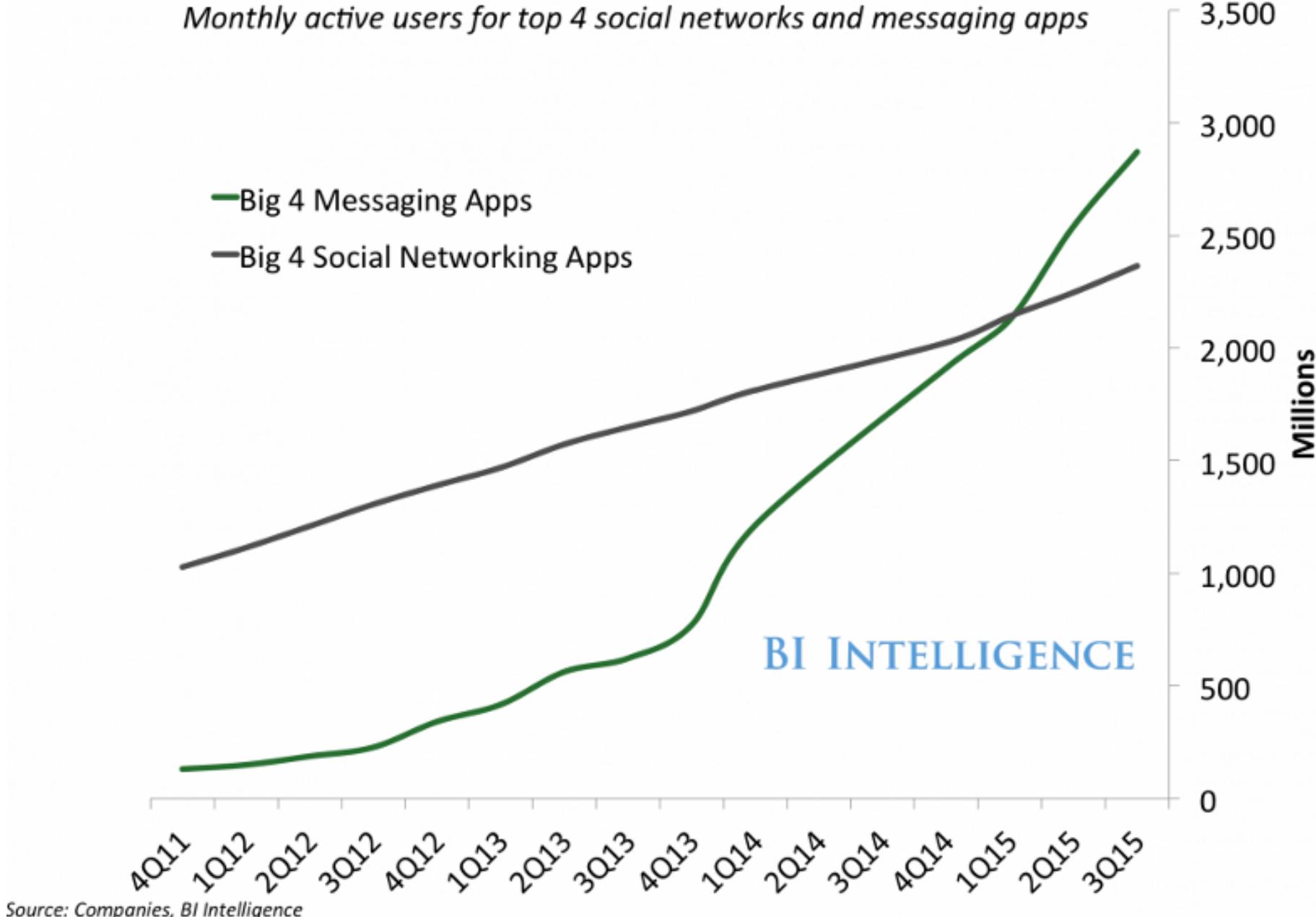
What's a bot?

Messaging Apps Have Surpassed Social Networks

Monthly active users for top 4 social networks and messaging apps

— Big 4 Messaging Apps
— Big 4 Social Networking Apps

BI INTELLIGENCE

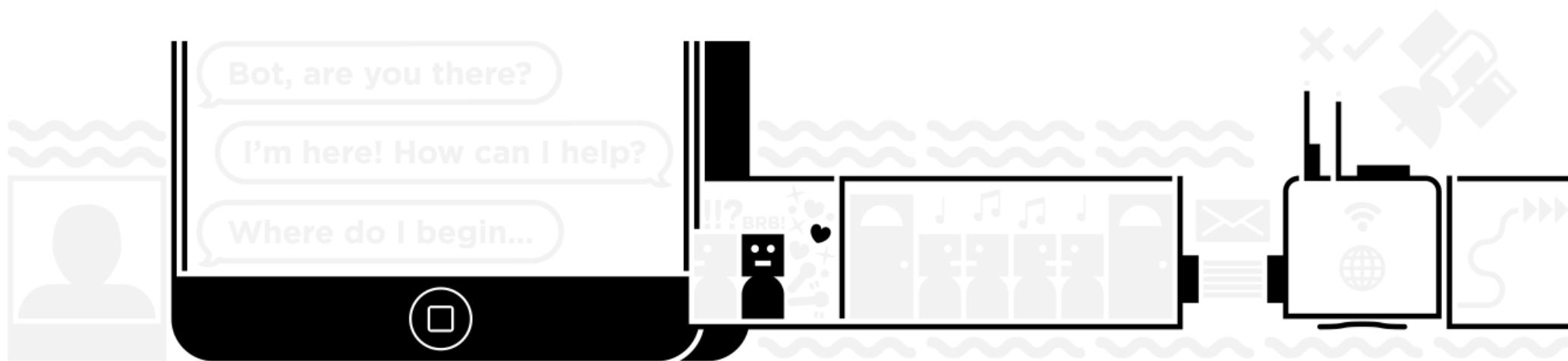


Source: Companies, BI Intelligence



What's a bot?

How does it work?





What's a bot?



Intellinote

Agenda



What's a bot?



Basic Bot



YouTube Bot

Natural Language Processing



Conversations



Deployment & Wrap-up





Basic Bot



“Hello”



“Yes, I love cats!”

“Hi”



“Do you like cats?”



Ingredients

Chat Platform



Some Complex Stuff

Programming Language



Deployment Platform





Basic Bot

howdy.

Botkit

Open-source toolkit for creating bots

Botkit is the most popular open-source toolkit for creating bots for messaging platforms. It provides a semantic interface to sending and receiving messages so developers can focus on creating novel applications and experiences.

Botkit is completely free to use and [available on Github](#).



Installing Botkit

Botkit is available via [npm](#). Download the package locally using the following command:

```
npm install --save botkit
```

Botkit Studio

Supercharged tools for Botkit users are coming soon from the Howdy team! [Sign up here to get early access](#).



Join the community

You can get help from the thousands of developers building with Botkit. Are you having trouble? Found a bug? Please browse the [GitHub Issues](#) to see if your issue is already being addressed.

Need more one-on-one chat? You can join over 2500 developers building

The screenshot shows the Microsoft Bot Framework website. At the top, there's a banner with the text: "There's a new version of the Microsoft Bot Framework. Update your bot now to use cards, carousels and action buttons. Learn how >". Below the banner, there's a large image of a man with a beard working at a computer. On the left side of the image, there's a purple gear icon. On the right side, there's a conversation window. The conversation starts with a message from the bot: "Haircut on Saturday". The user responds with: "I have these times available: 10:30 AM, 11:30 AM, See more". The bot then asks: "Great! Does this look correct?". The user replies: "10:30 AM". The bot also shows a small image of a woman getting a haircut.

Why not use a “kit” or “framework”?



Ingredients

Chat Platform



Framework



Programming Language



Deployment Platform



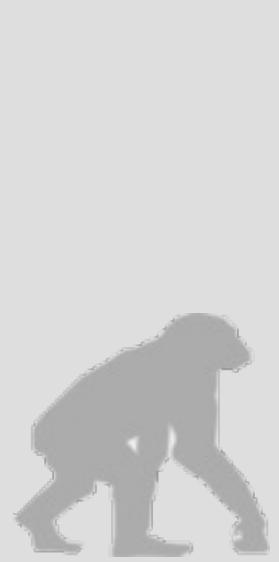


Basic Bot



Coding Time!!!!

Agenda



What's a bot?



Basic Bot



YouTube Bot

Natural Language Processing



Conversations



Deployment & Wrap-up





YouTube Bot

“Search for videos about cats”



“Ok, I'll search for videos about cats”

Clickable Title

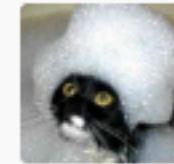
Description

Thumbnail

Rockin' Side Color

The funniest and most humorous cat videos ever! - Funny cat compilation

Cats are awesome, and super funny too! Who doesn't like cats and kittens? They make us laugh and happy! Just look how they play, sleep, fail, get along with dogs, get their heads stuck in boxes, re...



Views

3,765,215

Likes

11,435

Duration

00:10:16

Tiger Productions | Dec 31st at 12:06 PM

Short Stuff

Footer Stuff

Agenda



What's a bot?



Basic Bot



YouTube Bot



Natural Language Processing



Conversations



Deployment & Wrap-up

“Search for videos about cats”

“Search for YouTube videos about cats”

“Search for cat videos”

“Search for videos about cats but not lions”

“Search for videos about cats and kittens but not lions”

“Can you search for videos please about fixing my sink?”

“Find me some interesting videos regarding how to change my oil?”

And let's say we want to add more fields

search term

language

duration

order



“Search for videos in French about Paris”

“Search for short funny videos”

“Search for short French videos about funny things in Paris”

“Search for short funny videos with the most views”

Natural Language Processing



api.ai = Google

The screenshot shows the api.ai homepage. At the top, there's a dark header with the api.ai logo, navigation links for API & DOCS, PRICING, NEWS, BLOG, FORUM, ABOUT, LOG IN, and SIGN UP FREE. Below the header is a large banner featuring a person typing on a laptop. The text on the banner reads: "Conversational User Experience Platform. Now we're talking. Build brand-unique, natural language interactions for bots, applications, services, and devices." At the bottom left of the banner is an orange "Get Started for Free" button.

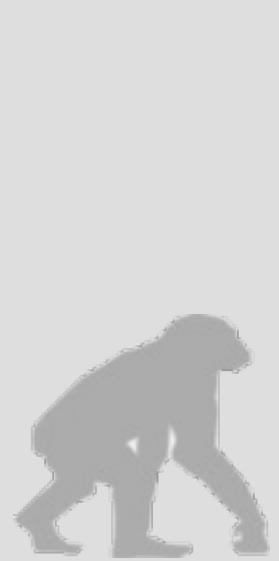
wit.ai = Facebook

The screenshot shows the wit.ai homepage. At the top, there's a header with social media links (Twitter, GitHub), navigation links for GETTING STARTED, DOCS, COMMUNITY, PRICING, FAQ, BLOG, and JOBS, and the wit.ai logo. Below the header is a section titled "Natural Language for Developers" with icons for Bots, Mobile apps, Home automation, Wearable devices, and Robotics. A sub-section below explains the mobile app integration: "Users enjoy a hands-free mobile experience while driving, working out, or Developers use Wit to easily build a voice interface for their app." At the bottom are two login buttons: "Log in with GitHub" and "Log in with Facebook", along with a link to "see how it works".

luis.ai = Microsoft

The screenshot shows the luis.ai homepage. At the top, there's a message: "The programmatic API keys will no longer be used in the endpoint starting 31/12/2016!" with a close button. Below this is a large teal section with the heading "Language Understanding Intelligent Service (LUIS)". It says "LUIS lets your app understand language" and lists "► LUIS is in beta and free to use" and "► Supported browsers: Internet Explorer 10/11, Chrome". At the bottom are two buttons: "Sign in or create an account" and "Watch Video!". The background features a stylized illustration of clouds and binary code.

Agenda



What's a bot?



Basic Bot



YouTube Bot

Natural Language Processing



Conversations



Deployment & Wrap-up



Let's say we **REQUIRE** more fields

search term

language

duration

Conversations



“Search for cat videos”



“Ok, how much time do you have?”

“Not much”



“Hmm, what order do you want to see (popularity, date, etc.)? ”

“Most Viewed”



“Ok, I’ll search for the most viewed cat videos in English that are just a few minutes long”

Agenda



What's a bot?



Basic Bot



YouTube Bot

Natural Language Processing



Conversations



Deployment & Wrap-up





Deployment

Pick your PAAS



Google Cloud Platform





Deployment

Pick your PAAS





Wrap-up

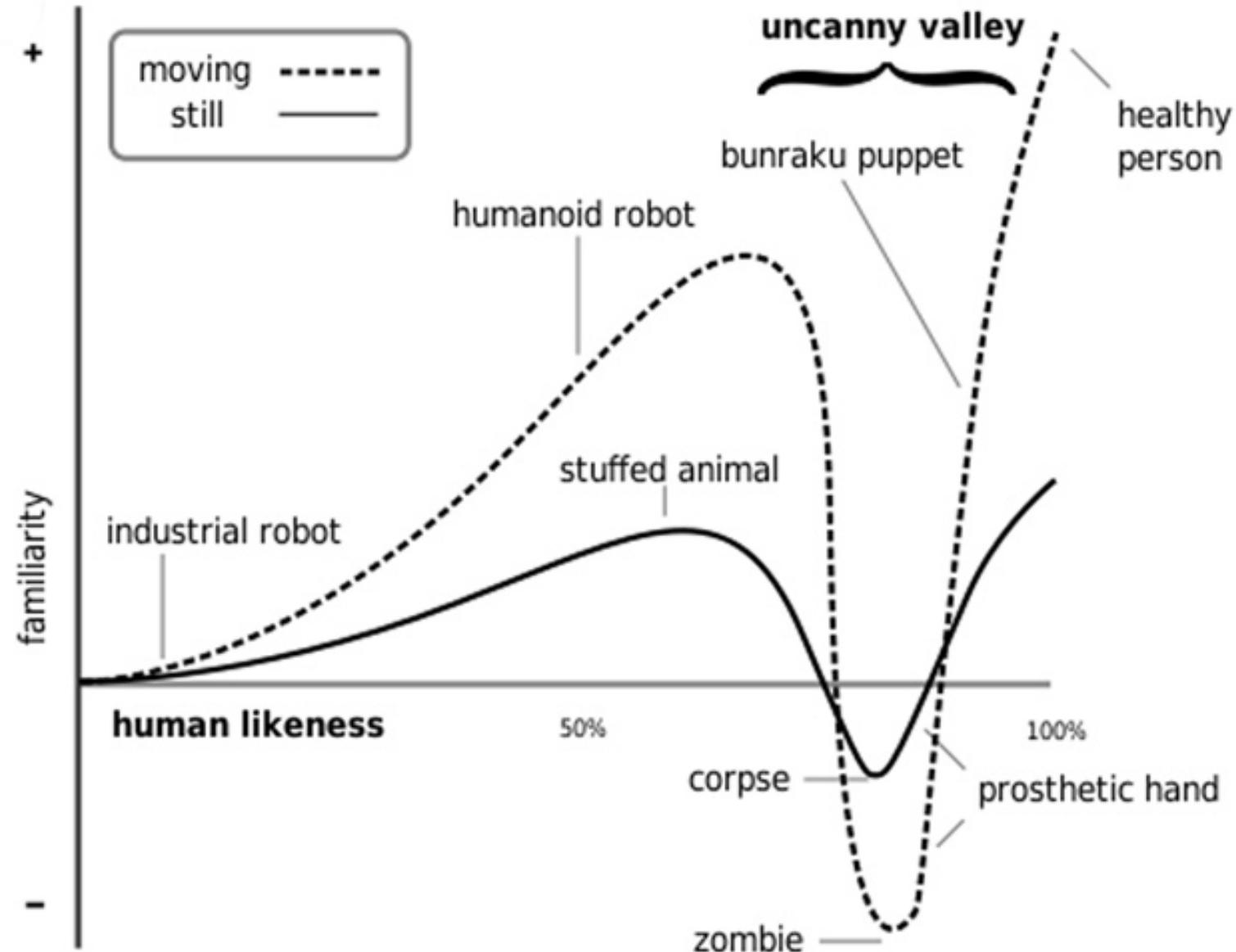
Is your bot too scary?





Deployment

Masahiro Mori's "uncanny valley"



Wrap-up



What's a bot?



Basic Bot



YouTube Bot

Natural Language Processing



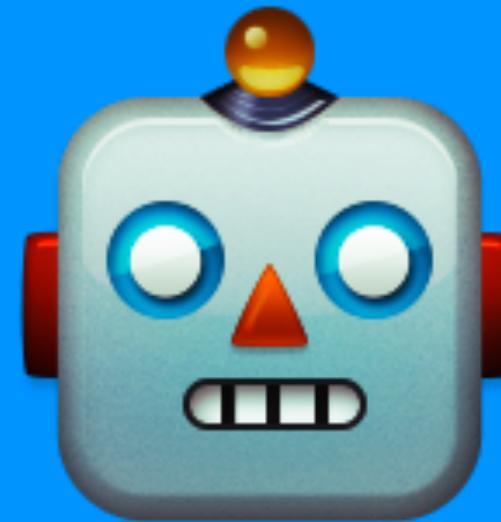
Conversations



Deployment & Wrap-up



Questions?





Nick Caruso
Entrepreneur & Consultant

ncaruso@gmail.com

(703) 581-8142

<http://www.linkedin.com/in/ncaruso>

Resources

- [wit.ai](#) (bought by Facebook)
- [howdy's botkit](#) (raised \$1.5+ mil in funding)
- [api.ai](#) (raised \$8.6+ mil in funding)
- [textit.in](#)
- [Motion.ai](#)
- [Chatfuel](#) (Ycombinator company)
- [IBM's Watson](#)
- [BeepBoopHQ](#)
- [Dexter](#) (owned by Betaworks)
- [converse.ai](#)
- [Gupshup](#)