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# Bots e cognitive services

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# What's a Bot

- A bot is a software typically connected to the web, able to interact with users by AI or ML techniques retrieving information from different channels.
- Developers writing bots all face the same problems: bots require basic I/O
  - they must have language and dialog skills
  - they must be performant, responsive and scalable
  - they must connect to users in any conversation experience and language the user chooses

# Why bots

- According to the recent report (by My Clever Agency), the chatbot
  - Are the preferred channel by consumers (84.6%) to obtain answers to simple questions.
  - Ranking second only after interactions face to face, and a lot more phone, social media, chat operators, online form or email.
  - Also today, consumers have a more positive perception Bots than they have mobile application.

# Microsoft Bot Framework

- Microsoft Bot Framework is a comprehensive offering to build and deploy high quality bots.
- Provides just what you need to build
- connect, manage and publish intelligent bots from different channels:
  - text/sms, Skype, Slack, Facebook Messenger, Kik, Office 365 mail and other popular services.
- <https://dev.botframework.com/>

# Microsoft Bot Framework

Your Bot Framework Bot



## Bot Builder

Tools and services to build great bots that converse wherever your users are.

- Open source SDK on Github for Node.js, .NET and REST
- From simple built-in prompts and command dialogs to simple to use yet sophisticated 'FormFlow' dialogs
- Support for rich attachments (image, card, video, doc, etc.); support for calling (Skype)
- Online/offline chat Emulator
- Add bot smarts with Cognitive Services for language understanding and more



## Developer Portal

Connect your bots to text/sms, Skype, Slack, Facebook Messenger, Office 365 mail and other channels.

- Register, connect, publish and manage your bot through your bot's dashboard
- Automatic card normalization across channels
- Skype channel auto-configured
- Embeddable Web chat control
- Host your bot in your app via the Direct Line API
- Fast, scalable message routing
- Diagnostic tools





## Bot Directory

Try, use, and add published bots to the world's top conversation experiences.

- Public directory of bots registered and published with Microsoft Bot Framework
- Users can try your bot from the directory via the Web chat control
- Users can discover and add your bot to the channels on which it is configured when the Directory is made public to end users

# Microsoft Bot Framework – Bot Builder SDK

- The Bot Builder SDK is an open source SDK that provides everything you need to build your Bot, available for
  - Node.js
  - .NET
  - REST API

# Microsoft Bot Framework – Bot Framework Developer Portal

- Lets you connect your bot(s) seamlessly with
  - text/sms, Skype, Slack, Facebook Messenger, Office 365 mail, other...
- 1. Register your bot,
- 2. configure desired channels
- 3. publish in the Bot Directory.
- All bots registered with Bot Framework are auto-configured to work with Skype and the Web.

# Microsoft Bot Framework – Bot Framework Developer Portal

The screenshot shows the Microsoft Bot Framework Developer Portal interface. At the top, there is a navigation bar with the Microsoft logo on the left and the user name 'Sebastiano' on the right. The navigation bar includes links for 'Bot Framework PREVIEW', 'My bots', 'Register a bot', 'Documentation', 'Bot Directory', and 'Blog'. Below the navigation bar, the main content area displays the details for a bot named 'Comune di Solarino'. The bot's profile includes a logo, the name 'Comune di Solarino', the creator 'Sebastiano Galazzo', and a list of hashtags: '#comune, #amministrazione, #enti comunali'. A 'Publish' button is located in the top right corner of the bot's profile. The main content area is divided into two columns. The left column, titled 'Details', contains the following information: Bot handle 'comunesolarino', Bot Framework Version '3.0', Messaging endpoint 'https://comunesolarino.azurewebsites.net/api/mess...', and Microsoft App ID '68c3c968-cc43-476d-9ec3-76ff305488c3'. An 'Edit' link is located to the right of the 'Details' section. The right column, titled 'Channels', contains a table of channels. The table has columns for 'Test link', 'Issues', 'Enabled', and 'Published'. The channels listed are Facebook Messenger, Skype, Telegram, and Web Chat. Facebook Messenger has a 'Message Us' button, Skype has an 'Add to Skype' button, and Telegram has a '@ComuneSolarinoBot' link. The 'Issues' column shows '0' for all channels. The 'Enabled' column shows 'Yes' for Facebook Messenger, Skype (Preview), and Telegram, and 'Yes' for Web Chat. The 'Published' column shows 'Off' for all channels. An 'Edit' link is located to the right of each channel row. Below the table, there is a link 'Get bot embed codes'. At the bottom of the right column, there is a section titled 'Add another channel' with a 'Direct Line' option and an 'Add' button. At the bottom left of the main content area, there is a section titled 'Test connection to your bot'.

Microsoft Sebastiano

Bot Framework PREVIEW My bots Register a bot Documentation Bot Directory Blog

 **Comune di Solarino** Publish

Sebastiano Galazzo | #comune, #amministrazione, #enti comunali

### Details Edit

Bot handle  
comunesolarino

Bot Framework Version  
3.0

Messaging endpoint  
https://comunesolarino.azurewebsites.net/api/mess...

Microsoft App ID  
68c3c968-cc43-476d-9ec3-76ff305488c3

### Channels

	Test link	Issues	Enabled	Published	
 Facebook Messenger	<a href="#">Message Us</a>	0	Yes	<input type="checkbox"/> Off	<a href="#">Edit</a>
 Skype	<a href="#">Add to Skype</a>	0	Yes (Preview)	<input type="checkbox"/> Off	<a href="#">Edit</a>
 Telegram	<a href="#">@ComuneSolarinoBot</a>	0	Yes	<input type="checkbox"/> Off	<a href="#">Edit</a>
 Web Chat		0	Yes	<input type="checkbox"/> Off	<a href="#">Edit</a>

[Get bot embed codes](#)

Add another channel

 Direct Line [Add](#)

Test connection to your bot

# Microsoft Bot Framework – Bot Directory

- The Bot Directory is a public directory of all reviewed bots registered through the Developer Portal.
- Users will be able to discover, try, and add bots to their favorite conversation experiences from the Bot Directory.

# Microsoft Bot Framework – Bot Builder

## High Level Features:

- Powerful dialog system with dialogs that are isolated and composable.
- Built-in dialogs for simple things like Yes/No, strings, numbers, enumerations.
- Built-in dialogs that utilize powerful AI frameworks like [LUIS](#).
- Bots are stateless which helps them scale.
- [FormFlow](#) for automatically generating a C# class that supports help, navigation, clarification and confirmation.
- SDK source code is found on <http://github.com/Microsoft/botbuilder>

# Bot builder - Install



23.756  
Downloads

1.875  
Downloads of v 3.2.1

127  
Average downloads per day

2016-09-14  
Last published

[Project Site](#)

[Contact Owners](#)

[Report Abuse](#)

[Download \(how-to\)](#)

[Package Statistics](#)



Share on Social Networks

## Microsoft.Bot.Builder 3.2.1

Microsoft Bot Builder is a powerful framework for constructing bots that can handle both freeform interactions and more guided ones where the possibilities are explicitly shown to the user. It is easy to use and leverages C# to provide a natural way to write bots.

High Level Features:

- \* Powerful dialog system with dialogs that are isolated and composable.
- \* Built-in dialogs for simple things like Yes/No, strings, numbers, enumerations.
- \* Built-in dialogs that utilize powerful AI frameworks like LUIS <http://luis.ai>.
- \* Bots are stateless which helps them scale.
- \* Form Flow for automatically generating a Bot from a C# class for filling in the class and that supports help, navigation, clarification and confirmation.

You might also be interested in the NuGet package `Microsoft.Bot.Builder.FormFlow.Json` that extends the Bot Builder with the ability to declaratively define FormFlow dialogs with JSON Schema.

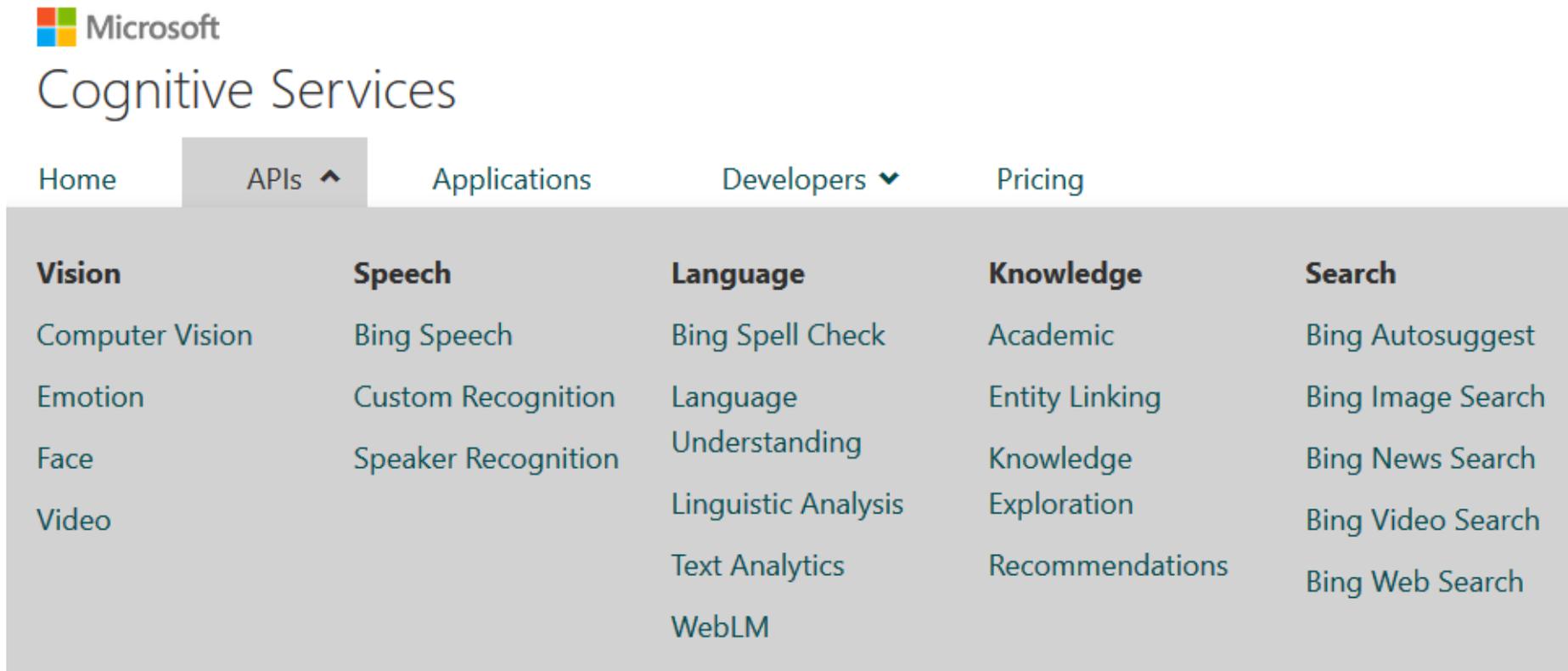
To install Microsoft.Bot.Builder, run the following command in the [Package Manager Console](#)

```
PM> Install-Package Microsoft.Bot.Builder
```

Owners



# Microsoft Cognitive Services



The screenshot shows the Microsoft Cognitive Services website navigation menu. At the top left is the Microsoft logo. Below it is the text "Cognitive Services". A navigation bar contains five items: "Home", "APIs" (with an upward arrow), "Applications", "Developers" (with a downward arrow), and "Pricing". The "APIs" menu is expanded, showing a grid of service categories and their associated APIs.

Vision	Speech	Language	Knowledge	Search
Computer Vision	Bing Speech	Bing Spell Check	Academic	Bing Autosuggest
Emotion	Custom Recognition	Language Understanding	Entity Linking	Bing Image Search
Face	Speaker Recognition	Linguistic Analysis	Knowledge Exploration	Bing News Search
Video		Text Analytics	Recommendations	Bing Video Search
		WebLM		Bing Web Search

# Microsoft Cognitive Services – LUIS

- Understand language contextually, so your app communicates with people in the way they speak.
- Library inside Bot Builder
- Client library also available on Github for not projects Bots
  - <https://github.com/Microsoft/Cognitive-LUIS-Windows>
- <https://www.luis.ai/>

# DEMO

LUIS

A working Bot

Face recognition

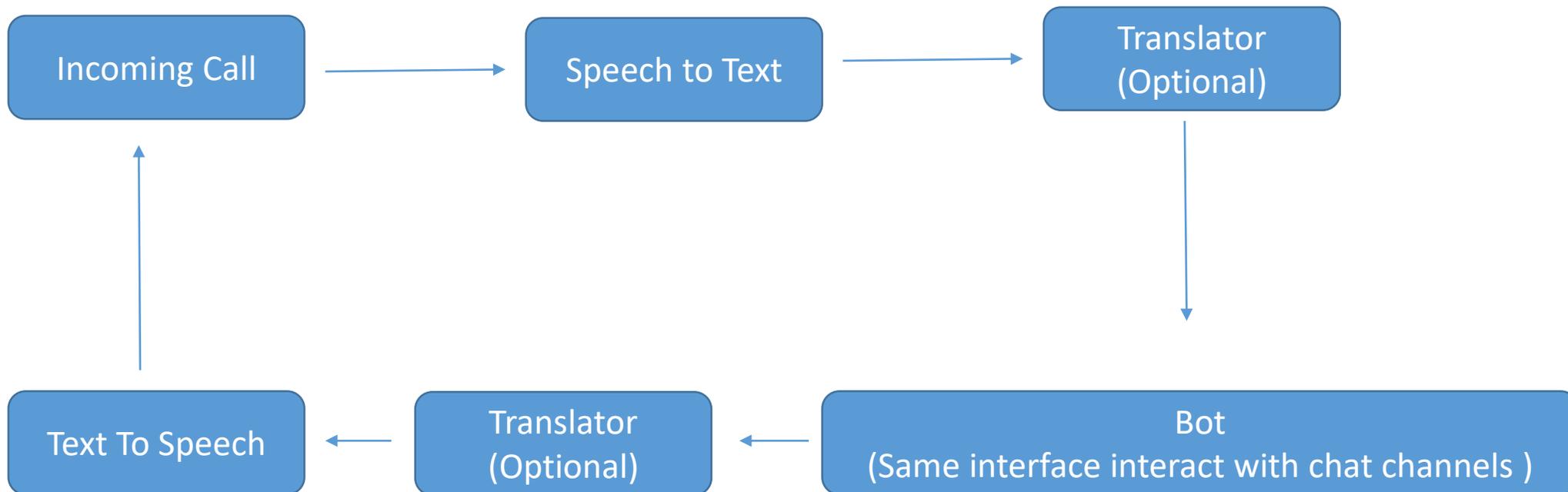
Image description

Bot – Bing Search API

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# Skype Call Management



# Skype call

[Video demo](#)



# Domande?

## Materiale su

<http://www.communitydays.it/>

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