

Should ChatBots play a role in your software development project

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1. WHAT ARE BOTS AND THEIR HISTORY

[Peggy]
(shift from “human” imposter to being recognized as “scripts” or “agents” that are conversational in style)

2. WHY ARE THEY SO POPULAR NOW

(timing of platforms and chat environments)
Is this really new?

3. BOTOLGY: TYPES / ROLES OF BOTS

Not just development roles, more general roles (e.g., transactional, informational, productivity, collaboration...)

Give general examples as well as some specific SE examples throughout

4. HOW TO CREATE BOTS AND WHERE TO HOST THEM

[Carly]
There is a need to distinguish between the services used to build bots (Creation Platforms) and the platforms where they live (Distribution Platforms). Although simple chat-bots can be built from scratch and self-hosted, many developers choose to leverage a variety of third-party technologies to streamline the process.

Many large companies, such as Microsoft and Facebook for example, offer a comprehensive set of tools to support both the creation and distribution of bots. Other companies, provide specialized solutions for specific aspects of bot creation and distribution.

4.1 Distribution Platforms

The distribution platforms are where the bots can be accessed by users. Bot distribution platforms can be general purpose, such as FB Messenger, or specific to a domain such as Slack in Software Development.

Distribution platforms offer many benefits to developers:

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access to a user base¹, defined interactions, marketing¹, and collecting payments¹. Launching your bot on a platform that has a stable user base helps overcome the cold start problem that many new applications face. When selecting a user base, consider the size / demographics of the user base and user cost to access platform. The distribution platforms also define and standardize how users can interaction with the bots. The most common bot interaction mechanisms include text (responding to the bot in natural language), commands (using a set of predefined keywords or phrases), selection (directly clicking on one of the presented options), and sometimes voice.

Distribution platforms also offer the ability to market or promote the bots. Popular distribution platforms offer “bot stores” where users can go and shop for bots. Many third-party also sites that maintain catalogs of bots across many distribution platforms.

Lastly, many distribution channels offer means of collecting payments from users. This is particularly usefully for transactional bots.

A summary of the popular distribution platforms and technologies are included in figure X.

4.2 Creation Platforms

Developer ecosystem for the different platforms... plug in to these communities...

The creation platforms are where the bots are designed and built. Creation platforms offer many benefits to developers: support for specific distribution channels, and a access to an active development community. A successful creation platform offers software foundations in the form of APIs, tool sets, services, or frameworks and a developer ecosystem for support¹. The creation platforms can support the development of bots for specific distribution platforms, or many produce general bots that can be deployed on multiple platforms. The services they provide range from documentation and code templates to no-code required bot building interfaces. Surrounding the creation platforms are developers using the same technologies, driving innovation and new use cases for bots. They provide software expertise in the form of tutorials, articles, discussions, and answering questions.

A summary of the popular creation platforms and technologies are included in figure X.

4.3 Design guidelines

¹<https://medium.com/mobile-lifestyle/messenger-vs-skype-vs-slack-vs-telegram-how-to-spot-the-winners-adc34b4ca066>

5. TAKEAWAYS

Bots are everywhere: pay attention to how bots are used around you, in cars, in the home but also watch how other developers use Bots in their development activities (reference FSE visions paper)

Bot ethics: Reference Asimov's rules for Robots here.. Should this be updated for Bots?

Bots may ease or increase collaboration friction... choose Bots not to remove collaboration (and in turn creativity) but use them to enhance collaboration (reference CSCW workshop paper)

6. SIDEBAR

Software bot usage in software development.

7. REFERENCES