

AI-powered conversational software

Fully-featured dialog system and domain-specific virtual assistant solutions for exceptional business efficiency



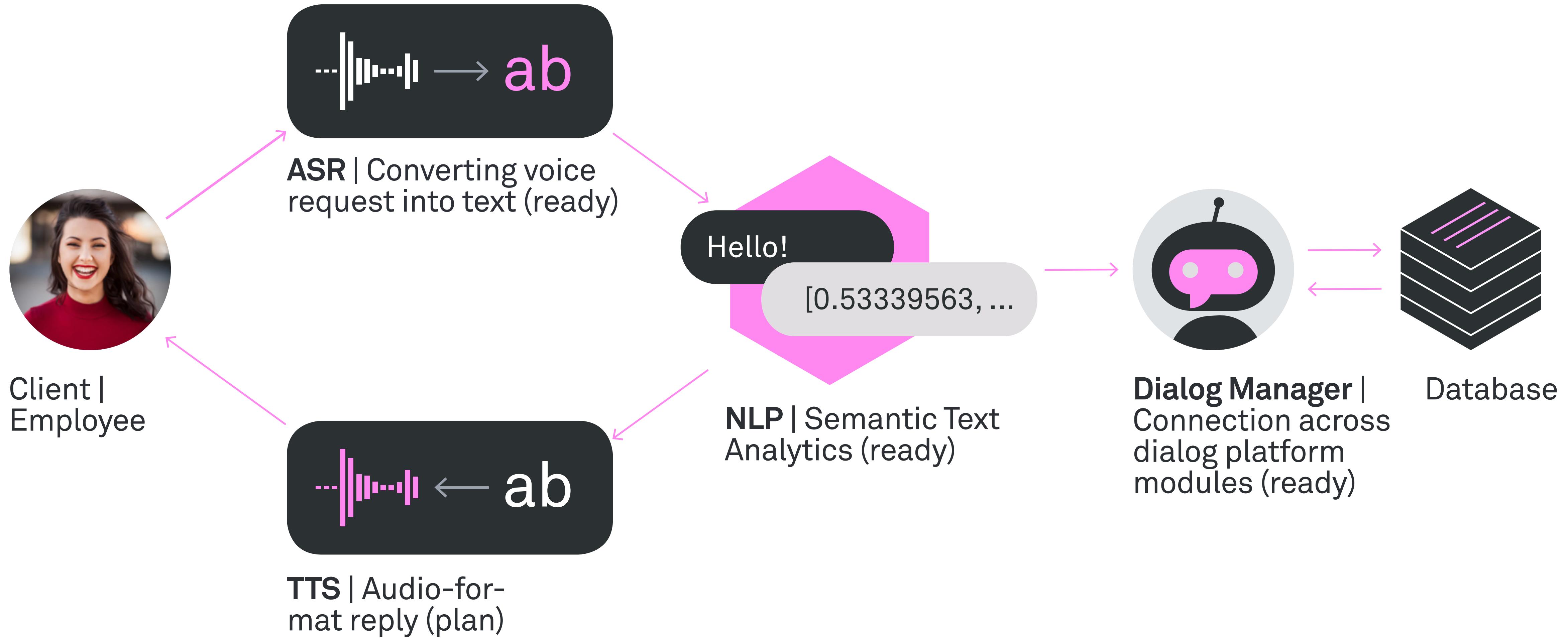
for

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chatme.ai

Dialog system & agents.
What is it

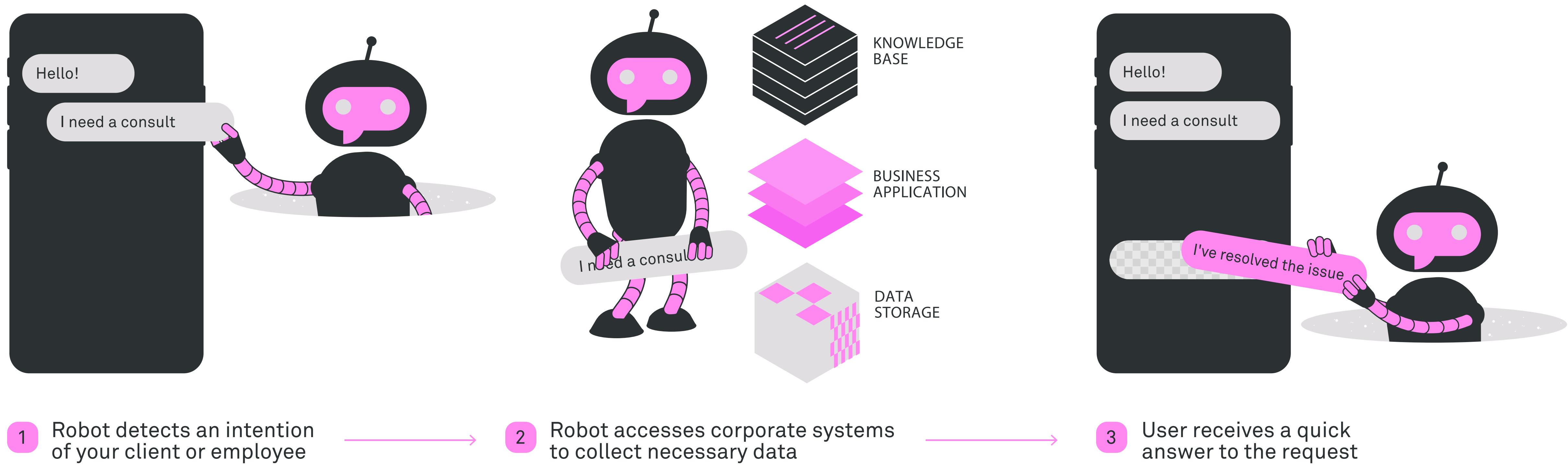
WHAT IS A DIALOG SYSTEM

CORE TECHNOLOGIES



WHAT IS A DIALOG AGENT

HUMAN-TO-MACHINE INTERACTION IN A SPECIFIC DOMAIN ON NATURAL LANGUAGE

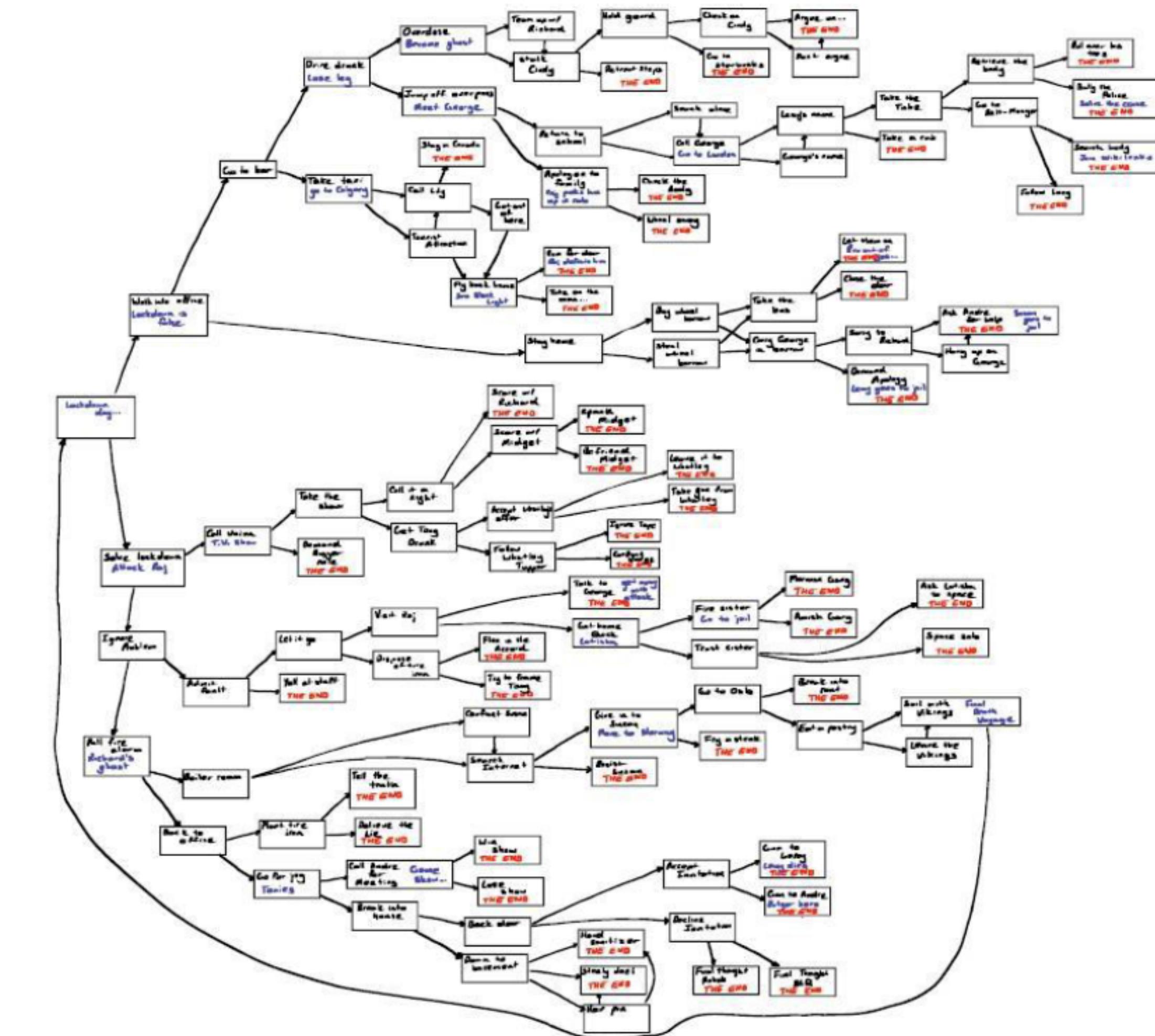


DIALOG DESIGN PAINS

**BUILDING SUCH A DIALOG TREE
REQUIRES MANUAL
WORK ON DIALOG STRATEGY
CREATION:**

- Learn principles of dialog design
 - Training data samples for intents
 - Named entities collection
 - Settings for context memory
 - Transition rules for dialog trees
 - Reply texts
 - Model testing
 - Integrated calls to databases

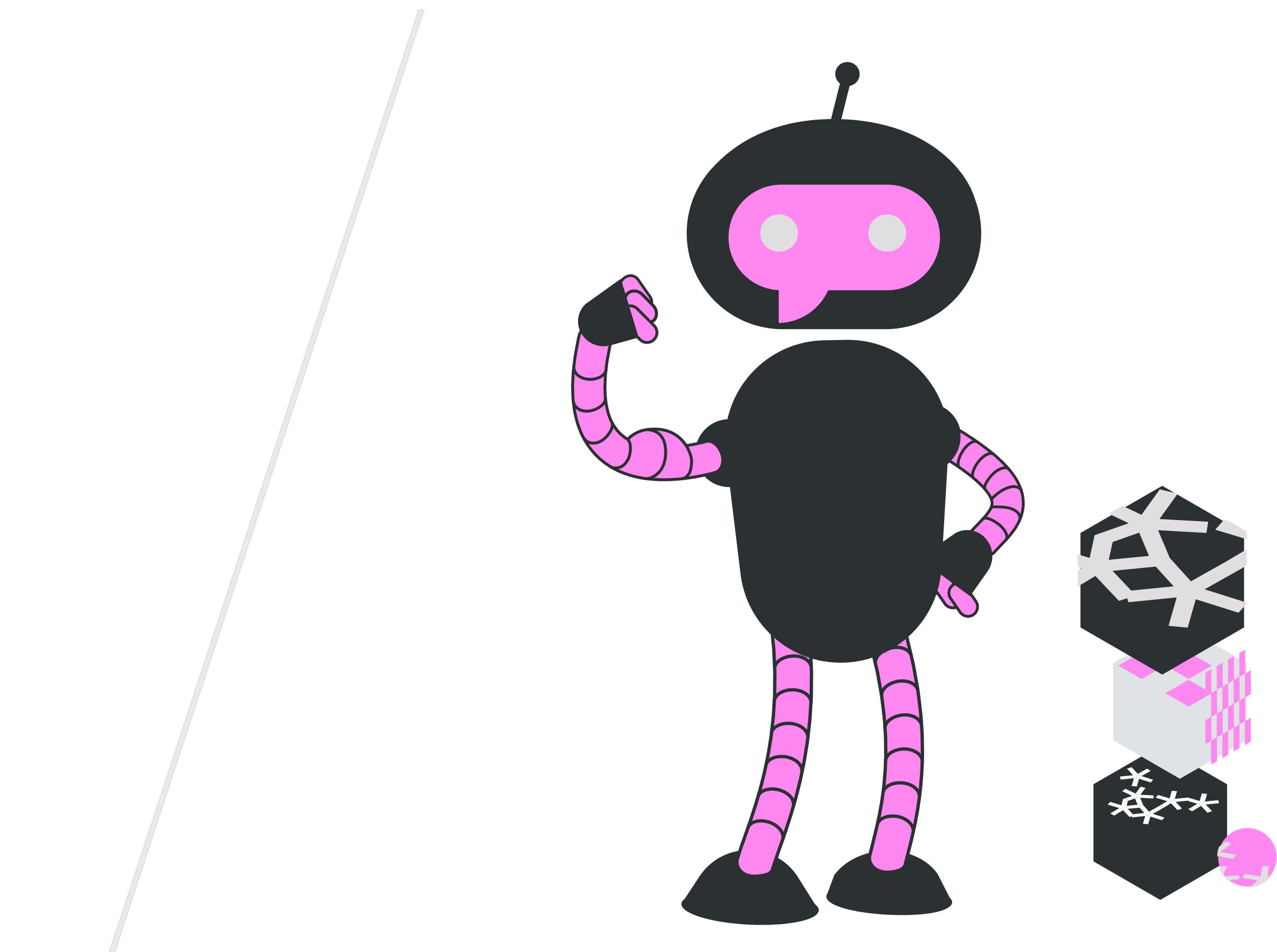
+ Logs analytics, ongoing training, etc..



OMG..

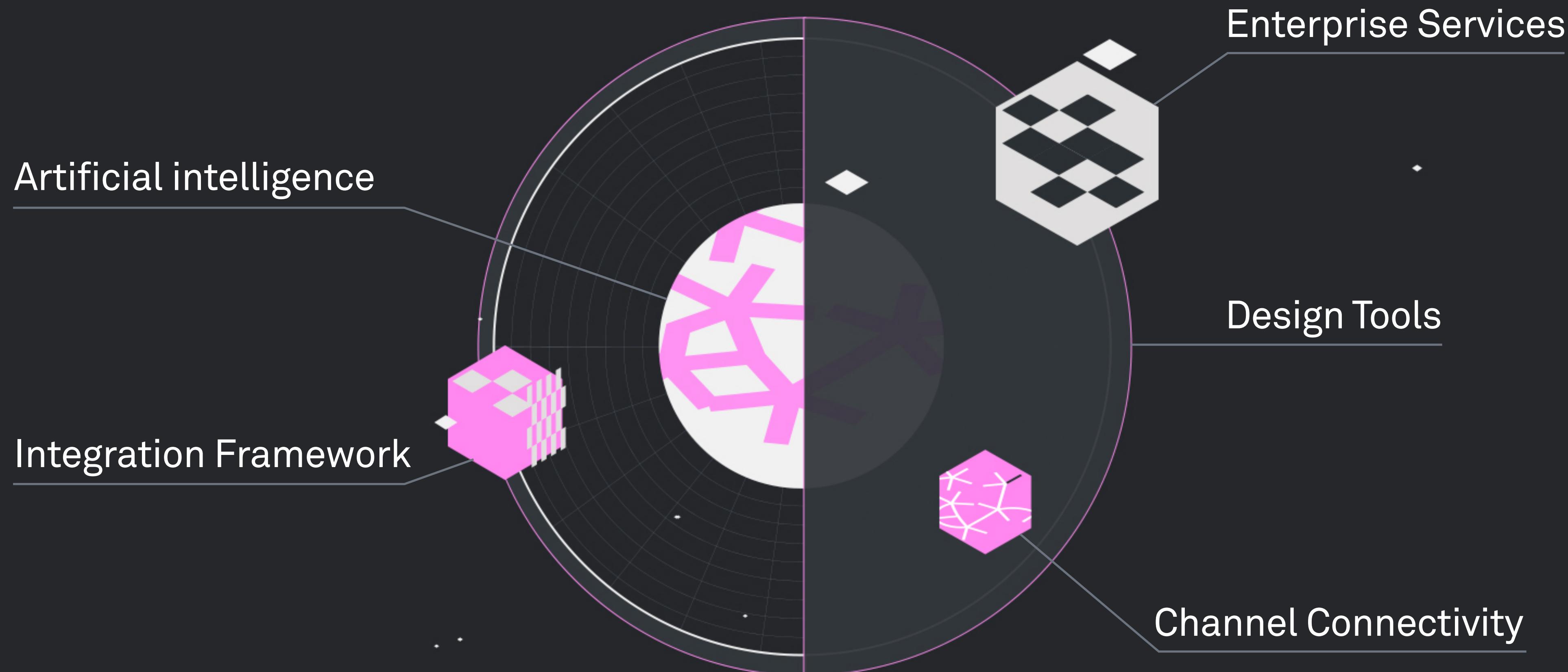


WHERE HUMAN IS POWERLESS AND ANOTHER BOT FAIL,
OUR GOAL-ORIENTED ASSISTANTS **SOLVE MOST PROBLEMS WITH CONFIDENCE.**

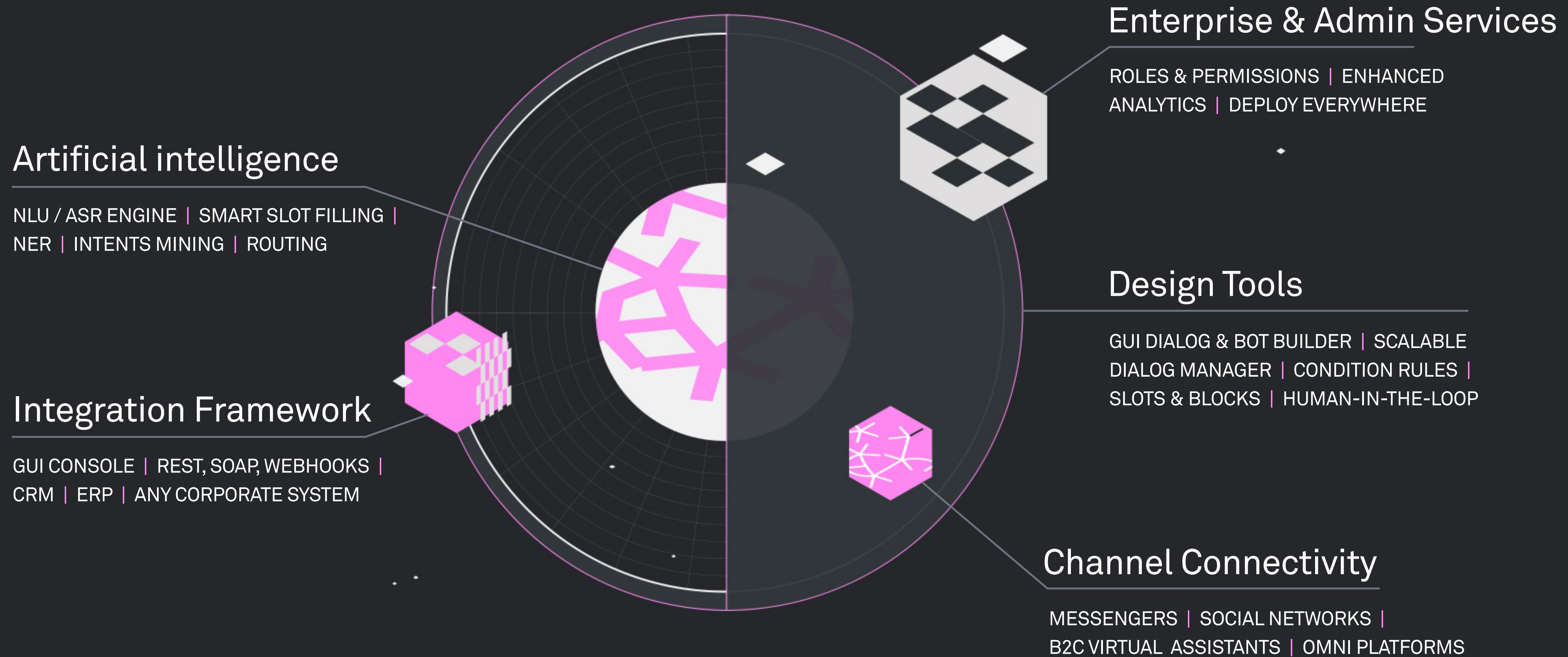


Technologies & platform

CHATME.AI HIGH-LEVEL PLATFORM ARCHITECTURE



CHATME.AI HIGH-LEVEL PLATFORM ARCHITECTURE



Key modules of the platform

Key modules of the platform

Dialog Manager

Pre-build actions or add your custom, flexible context settings for the bot memory, own DSL for building dialog strategy with any specific requirement

GUI Bot & Dialog Builder

Edit dialog strategy and conversational scenarios with a power to add UI / UX components, tune context and enable AI feature

Smart Human-in-the-loop

Integrated connection of human operator based on the designed use cases together with AI or rule based routing to the competent operator

Analytics

Basic statistics to quickly track usage, get actionable insights for agent's continuous evolution based on tagging service

Administration Console

Easy-to-use dashboards to manage admin roles, access permissions and agent assignment

System Box

Integration framework as a flexible approach for connecting with corporate business systems

NLU Engine

Our own language independent and continuously trained NLU model to recognize intents, entities, keywords, detect emotional context and other NLP features

ASR Engine

Voice2text engine with features like gender classification and biometric voice authentication

Operator Helper

AI-based prompts for human operator to reply faster to users

Intelligence

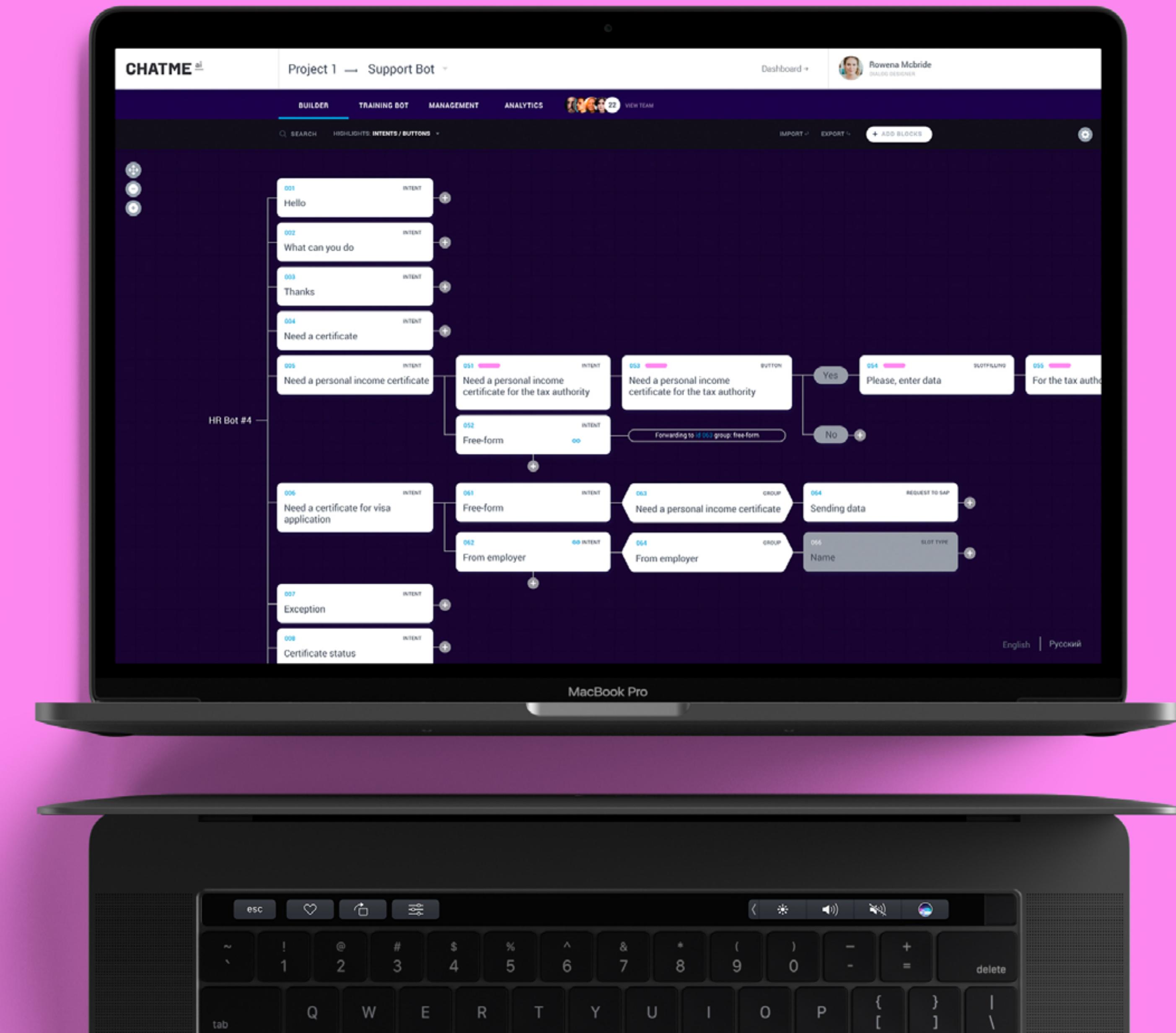
Dialog design automation features for building & supporting complicated agents

Channel Connectors

Messengers, social networks, virtual assistants, web chats, and omnichannel platforms to connect with users in any convenient way

Deploy Everywhere

Cloud, on-premise, or hybrid deployment – up to your preference



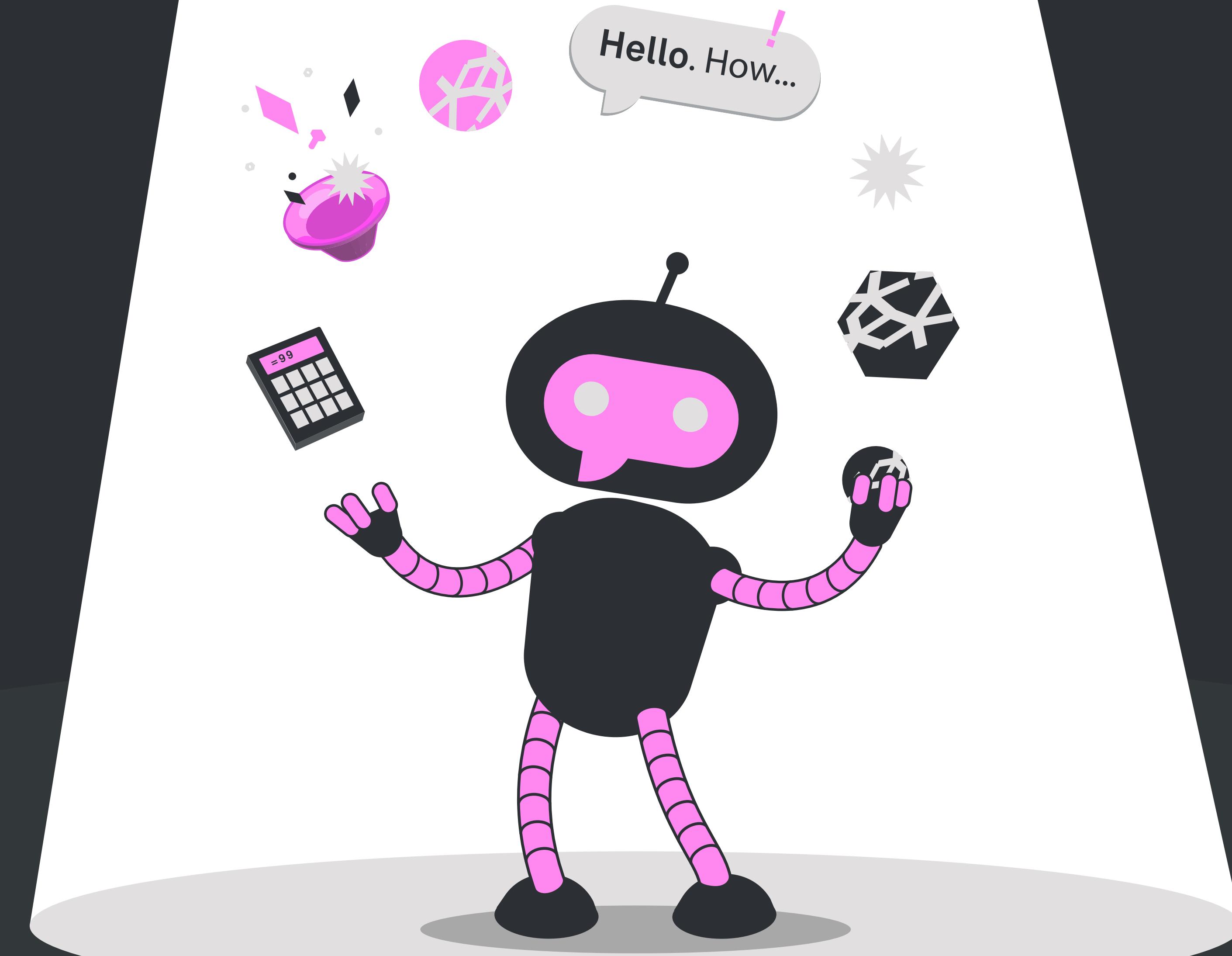
0.1 Dialog Service

Dialog Manager

Proven dialog strategy executive

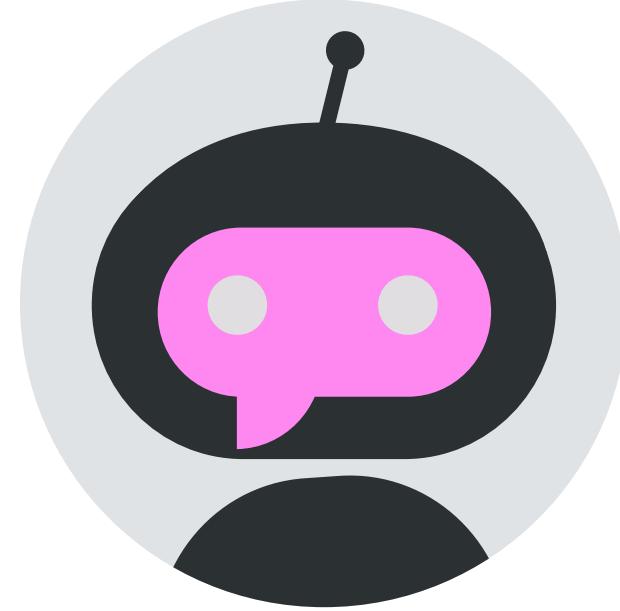
Dialog strategy is configured on our own DSL (domain specific language) specially developed for building a complicated dialog logic.

We can provide you with mathematical validation of scalability & completeness of our dialog service for building of the most complicated agents.



Dialog Manager

Continuously upgrading by actions and dialog strategy patterns



**I HAVE MANY FEATURES &
I CAN DO MANY THINGS AT ONCE & YOU CAN SCALE**

- I remember information and easily manage conversation context
- I know exactly how to handle a dialogue by transition rules and navigate user
- I monitor conversation development and tone

Action: access database – I collect information about user and ready to updated our database

Action: call NLU & check entities – I've initiated slot filling and need to check if there is any context

Create your own custom N + Action...

0.2 NLU Service

NLU Service

Understanding of natural language

Blocks in the pipeline that do the conversion over the phrase are called components. We can tune the pipeline and any components to engineer the best domain-specific linguistic model for your corporate needs.



NLU Service

Base pipeline

Processes a phrase from the user, extracts the entity and classifies it as intentions.

The module is arranged according to the conveyor principle. The entities that do the conversion over a phrase are called components. Serial component for service.

1 TOKENIZATION

Hello | I am | Henry | Smith | What |
is | my | bonuc | balanse

2 SPELLING CORRECTION

Hello | I am | Henry | Smith | What |
is | my | bonuses | balance

3 LEMMATIZATION

Hello | I be | henry | smith | what |
be | my | bonus | balance

4 NAMED ENTITY RECOGNITION

Hello | I be | henry | smith | what |
be | my | bonus | balance

5 WORD VECTORIZATION

[[0.75074252, ... 0.91397741],
[0.9040406 , ... 0.19417503], ...]]

6 PHRASE VECTORIZATION

[0.53339563, ... 0.91397741]

7 INTENT RECOGNITION

number_of_bonus_units

8 OUTPUT RESPONSE

```
{intent: number_of_bonus_units,  
entities: { [ name: | Henry |  
surname: | Smith | ] }
```

And other cool
modules...

AI Intelligence features

Intelligence features

Chatme.ai combines the state of the art in software and NLP technologies, mathematics and linguistics to develop really smart and efficient virtual assistants for business use.

Intent Mining

Semi-automatic tool to capture and classify user intents from human dialogs

Smart Slot Filling

Goal-oriented scenario modeling toolkit for the agent

Continuous Evolution

Learning from mistakes and human operator actions

Small Talk

Short conversations on abstract topics to make your bot “human-like”

Sentiment Analysis

Recognizing attitudes, emotions, and opinions to redirect difficult dialogs to operators

Various NLP add-ons

Math calculations, list works and other business-related tools

Novelty Detection

Auto-detection and signalization of new yet unrecognized intents and tasks

NER (Named Entity Recognition)

Classification of general and professional / domain-specific named entities

Multiple Intents Routing

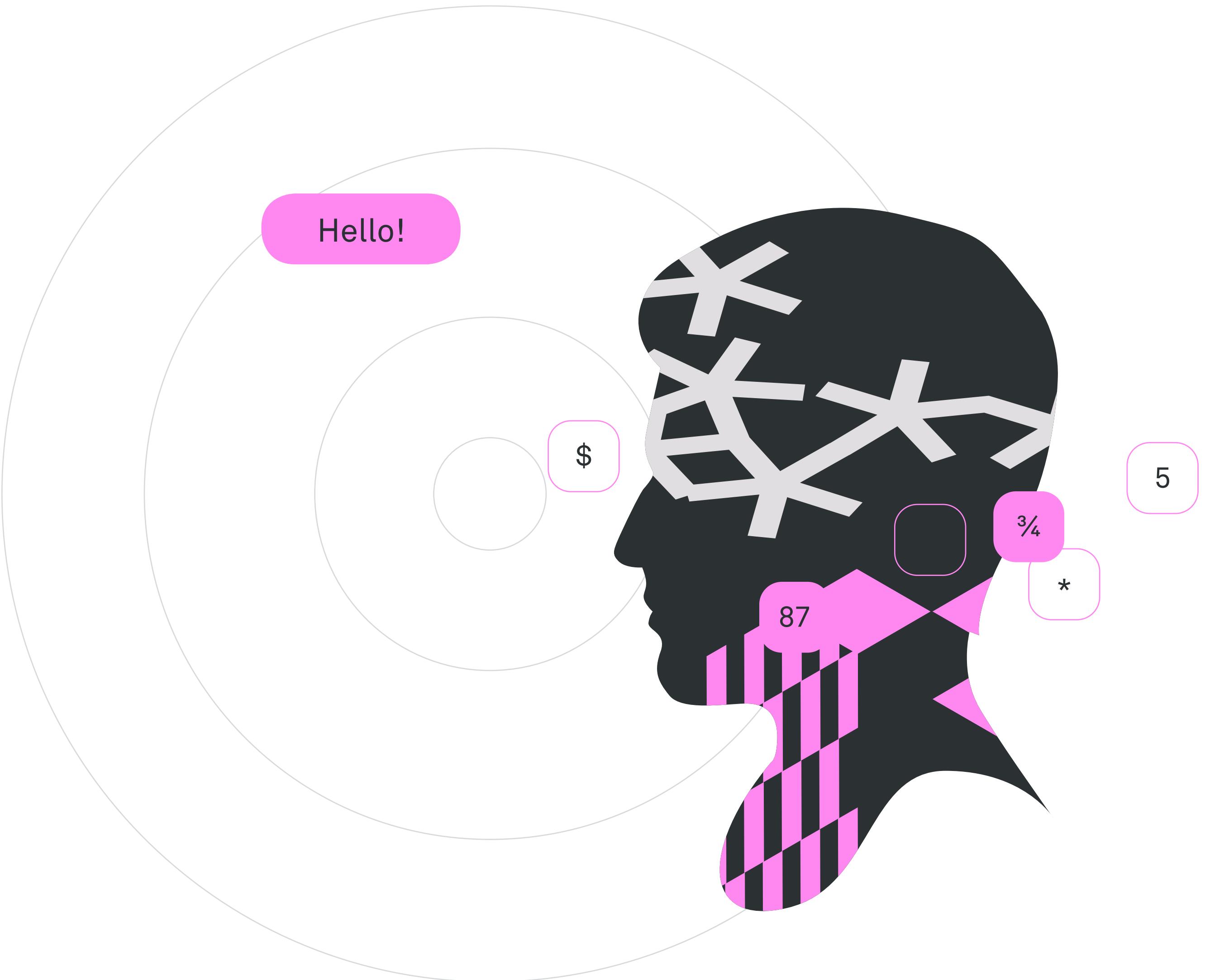
Handling multiple intents in single utterance and specifying intents with auto-designed clarifying questions

Recommendation Algorithm

Personalized communications based on user behavior and individual preferences

Operator Routing

AI-enabled service for routing of text requests to a relevant operator

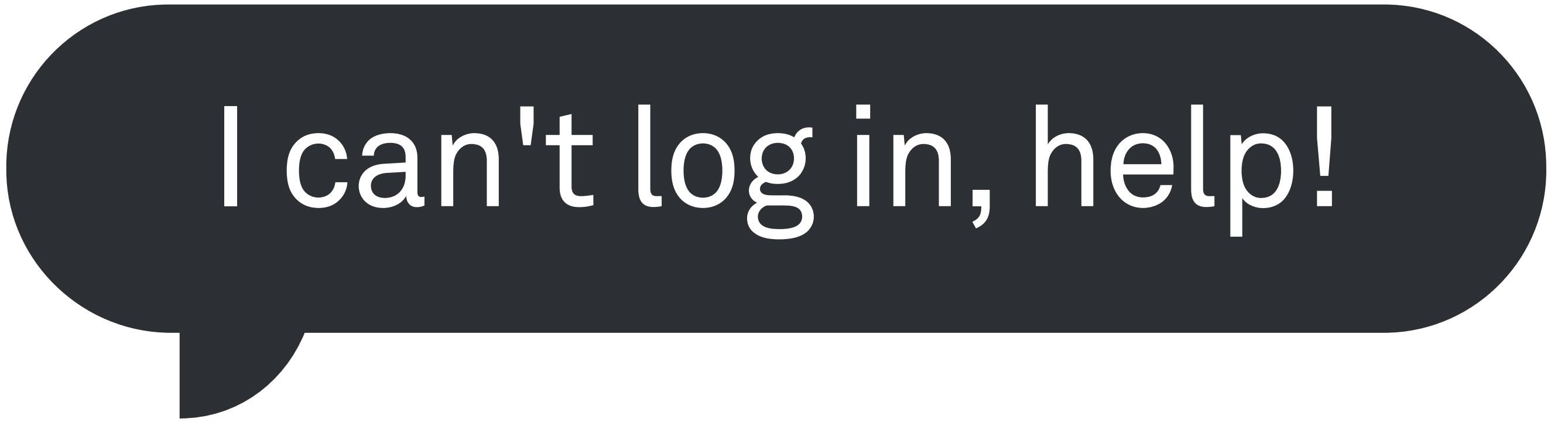


0.1 Smart Routing



make the work of dialog designer easier...

1 Bot gets the question



I can't log in, help!

- 2 There is no clear intent in the question.
Bot is not sure which scenario to use.

Intent scenarios library

Website login

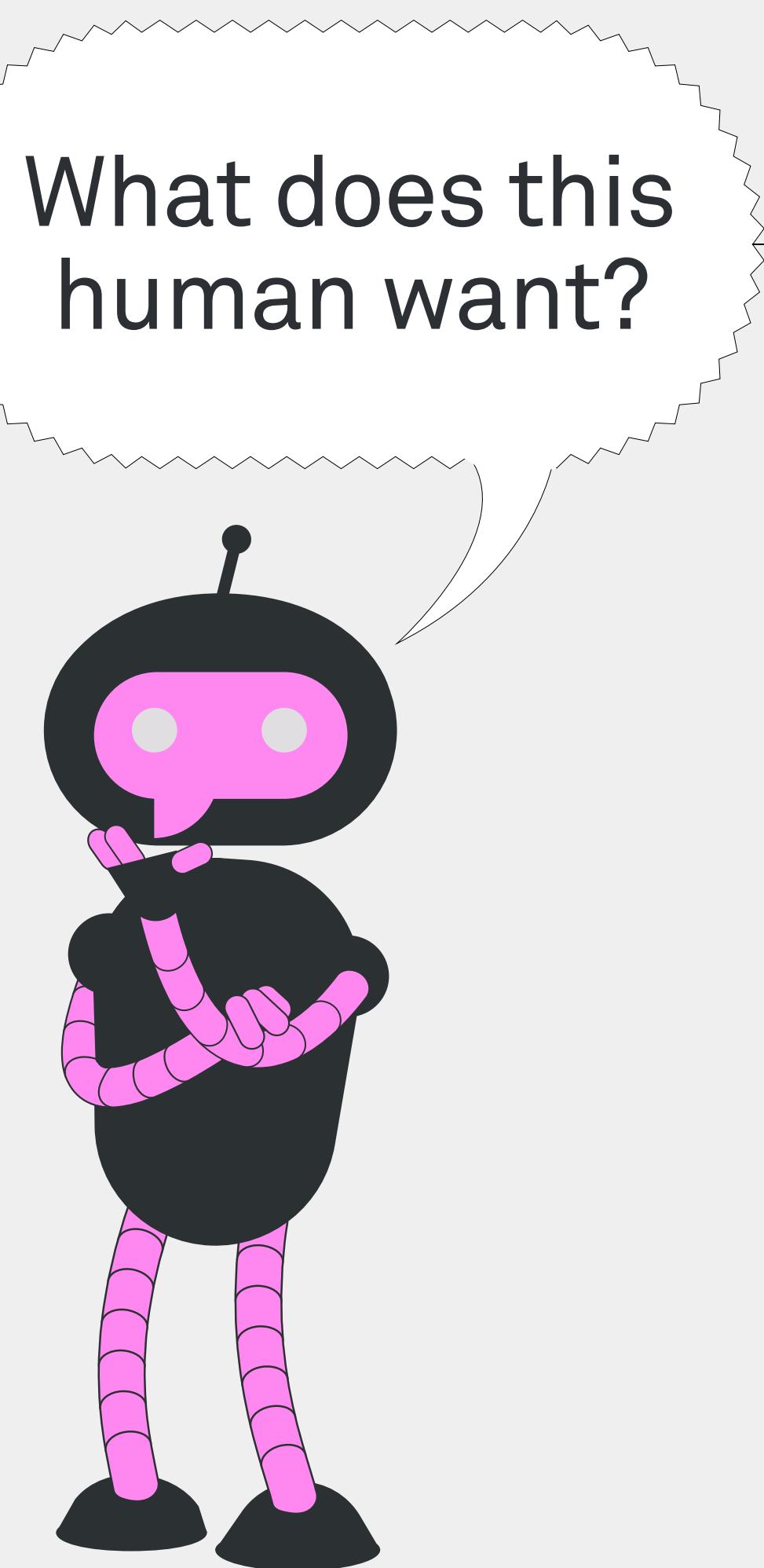
Service crash

Forget log pass

Mobile app login

New user apply

Need operator



- 3 Bot chose the most likely scenarios based on the clusters of the most probable intents

Scenarios library

Website login

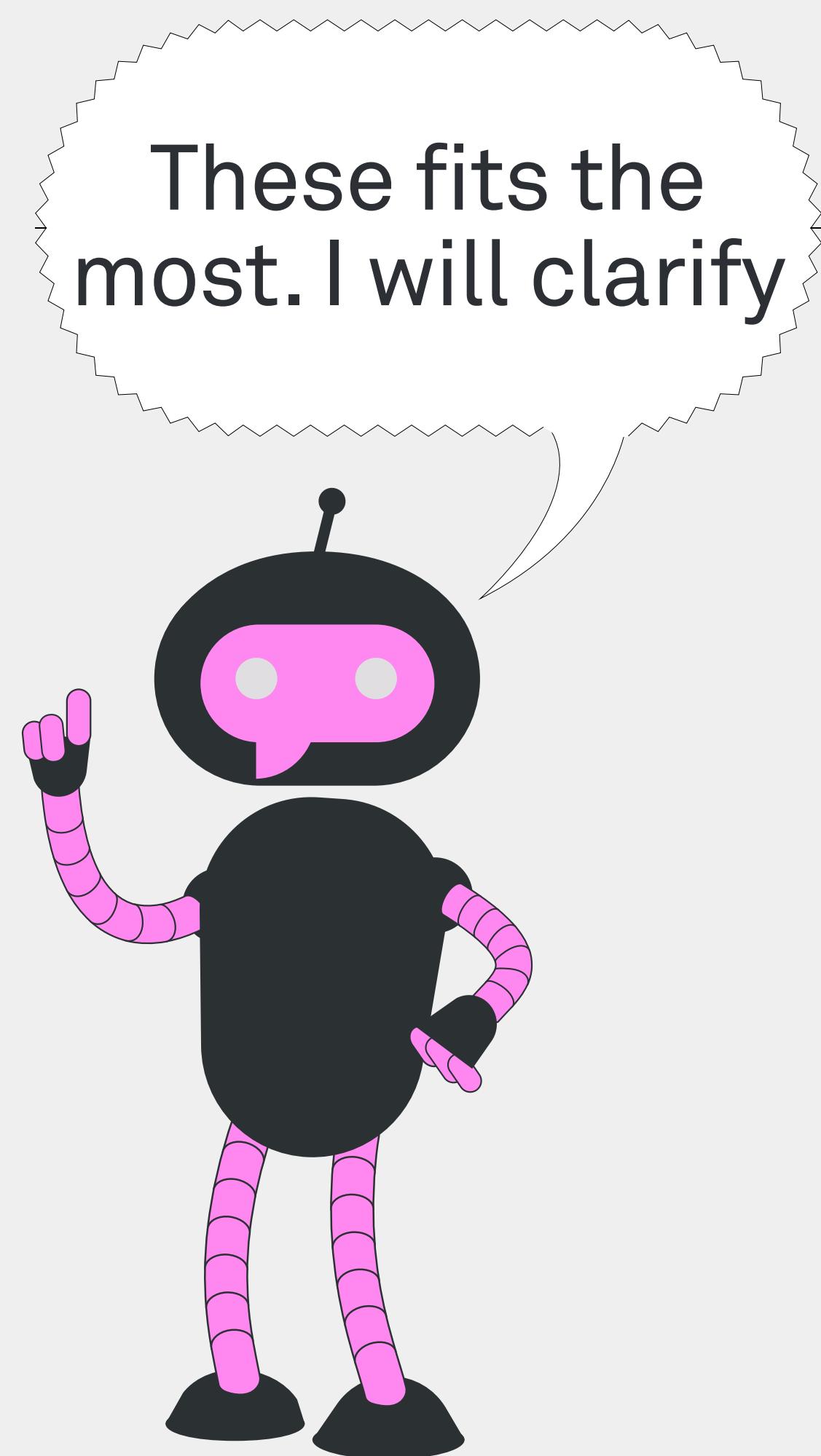
Loyalty program

Forget log pass

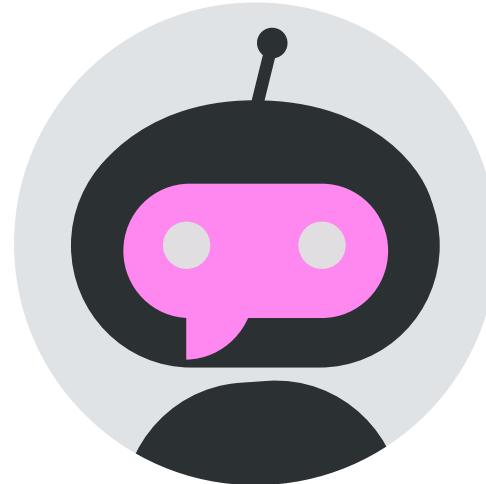
Mobile app login

Catalog filters

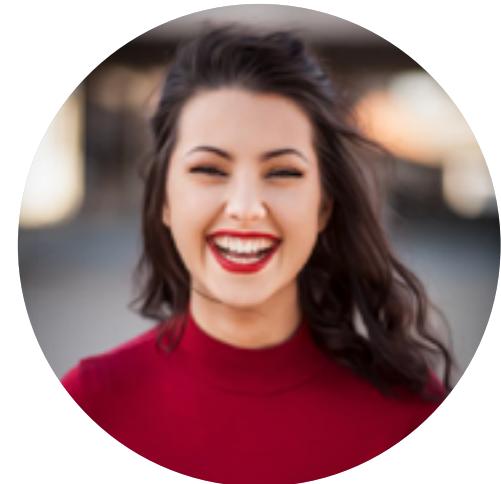
Search things



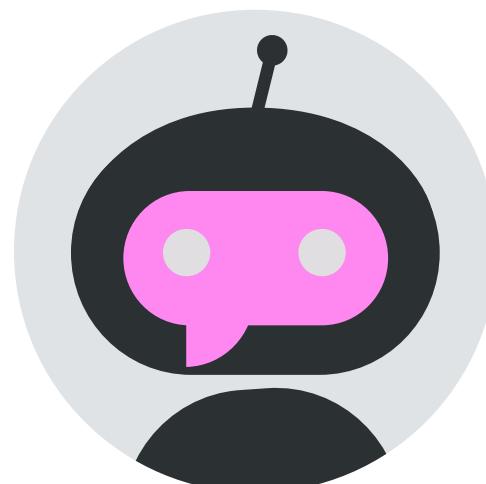
- 4 Bot asks clarifying question.
He offers 3 scenarios



Do you mean 'Website login'
or 'Mobile' or 'Forget log pass'



Forget login and password



Ok! I will resolve this ASAP

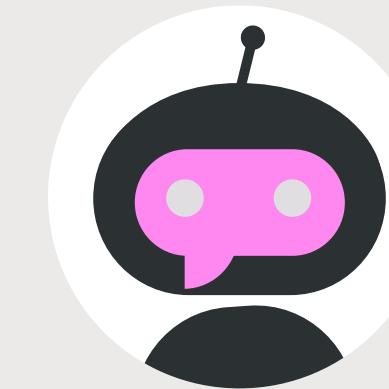
0.2 Multiple intents execution & memory

make the work of dialog designer easier...



AGENT DETECTS MULTIPLE INTENTS IN ONE SENTENCE AND PROCESS THEM STEP-BY-STEP.

You can set in advance, for how long virtual assistant remembers dialog context within single session or throughout multiple ones. Agent will use this data to perform necessary activities. No dumb question to the user.



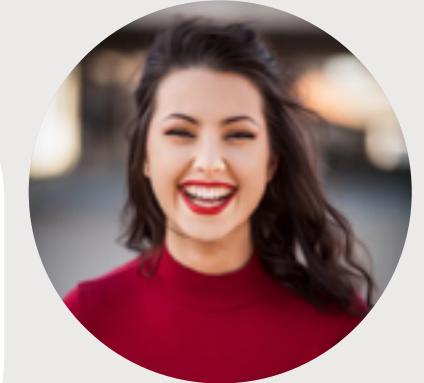
Hello! Can I help you?



+25°C ☀️☁️



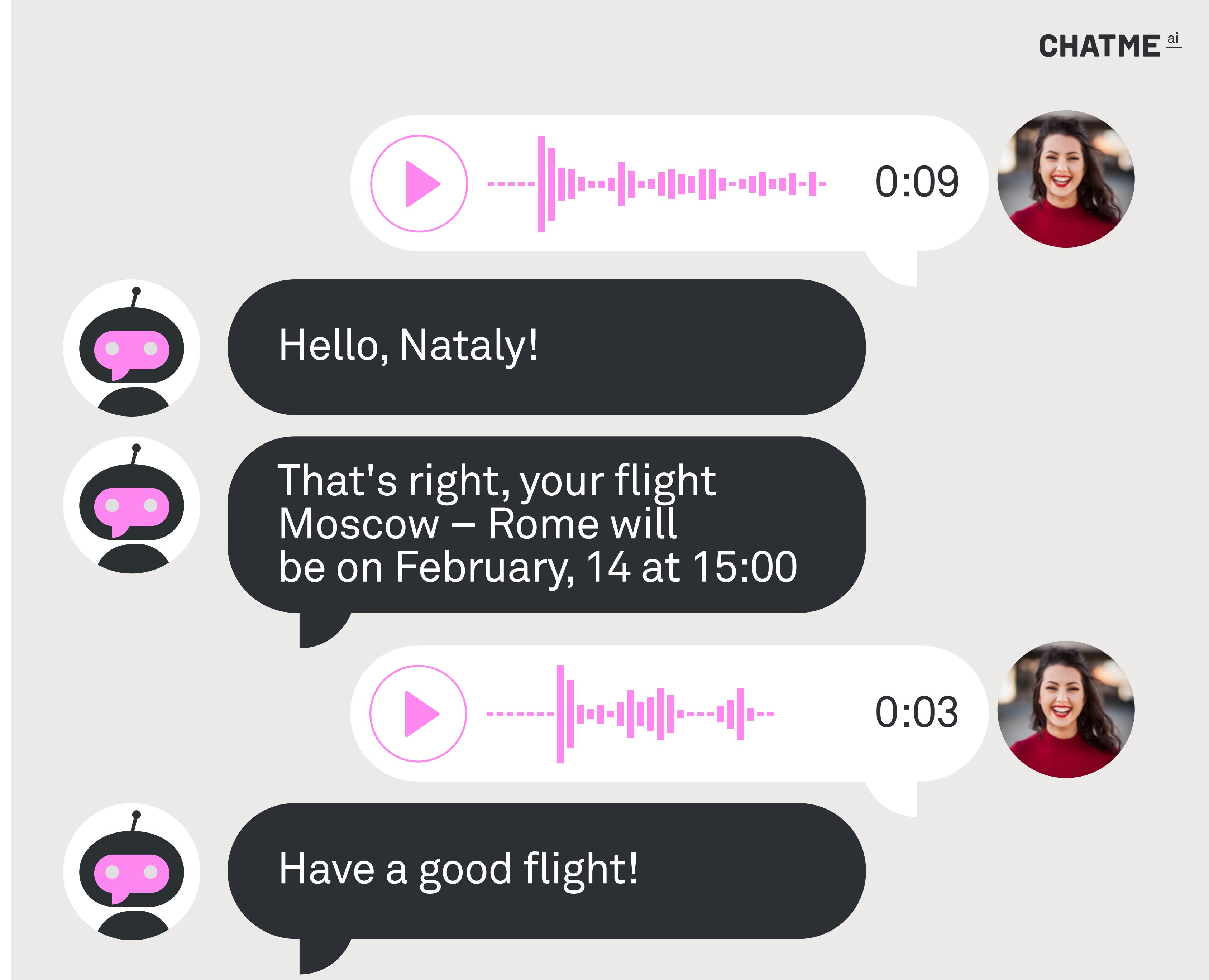
The nearest cafe "Cup of coffee" is located in the next building in Tverskaya 28!



0.3 Automatic Speech Recognition

Understanding of audio requests.

- 1 We can do voice agents
- 2 We can collect more data for training agents
- 3 We can do domain adaptation for a specific business with the best recognition quality
- 4 Additional market and revenue

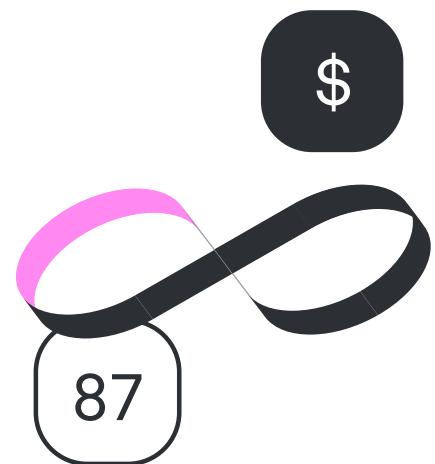


And other cool
features...

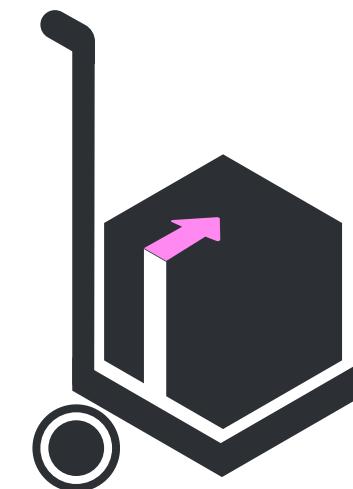
Solutions

Pre-built and custom smart agents for a variety of business functions in every industry

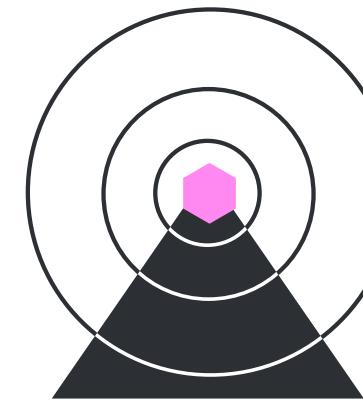
Industries



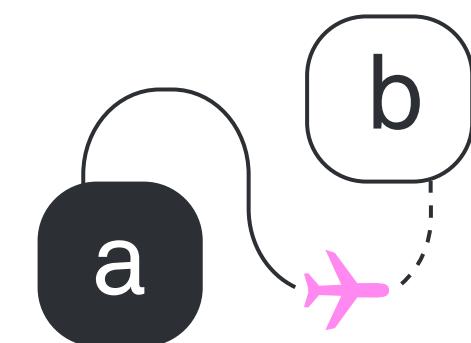
BFSI
B2B & B2C banking
Trading & PFM
Insurance services



Logistics
Leads processing
Shipment tracking
Notifications & feedback

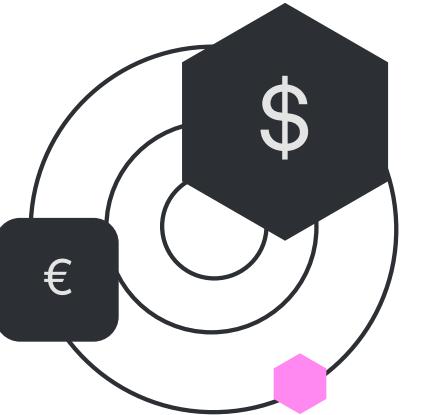


Telecom
Customer Support
Payments
Marketing & Loyalty



Travel
Search & Bookings
Promotions & cross sale
Travel guidance

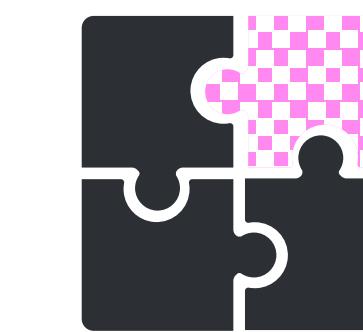
Functions



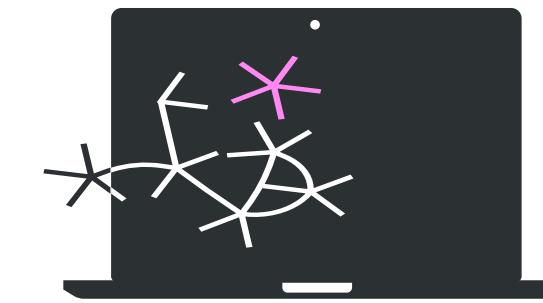
Sales
Bookings & Payments
Marketing
Lead Management



Customer Care
FAQ automation
Complaint handling
Tips for operators



HR
Recruitment
Onboarding
Helpdesk



IT Service Desk
Ticket management
Equipment requests
Authorization issues

Components of the ITSM box solution

KPIs | Business Value

Marketing materials | Documentation & Guidelines | L2 Support

Business Use Cases

50 user scenarios (skills) in service desk

Dialog Design

Dialog strategy configuration | Linguistic model | Context | Test

Intents Library

Entities Library

Pre-build Integrations

L1 Operator Smart Routing

IT Service Desk in-the-box

70% economy on payroll of L1 operator

65% decrease in calls to service desk

45% speed up in ticket resolution

1 pager | presentation | website content

API & Documentation for partner

Technical support process

50 skills detected & designed with a proven business value

Ticket creation | Ticket status | Password reset | Access permissions | Reporting | Incident notifications | Incident status | FAQ...

Ready for use dialog strategy incl. context settings, trained general

FAQ, Slot filing for RPA

150 intents

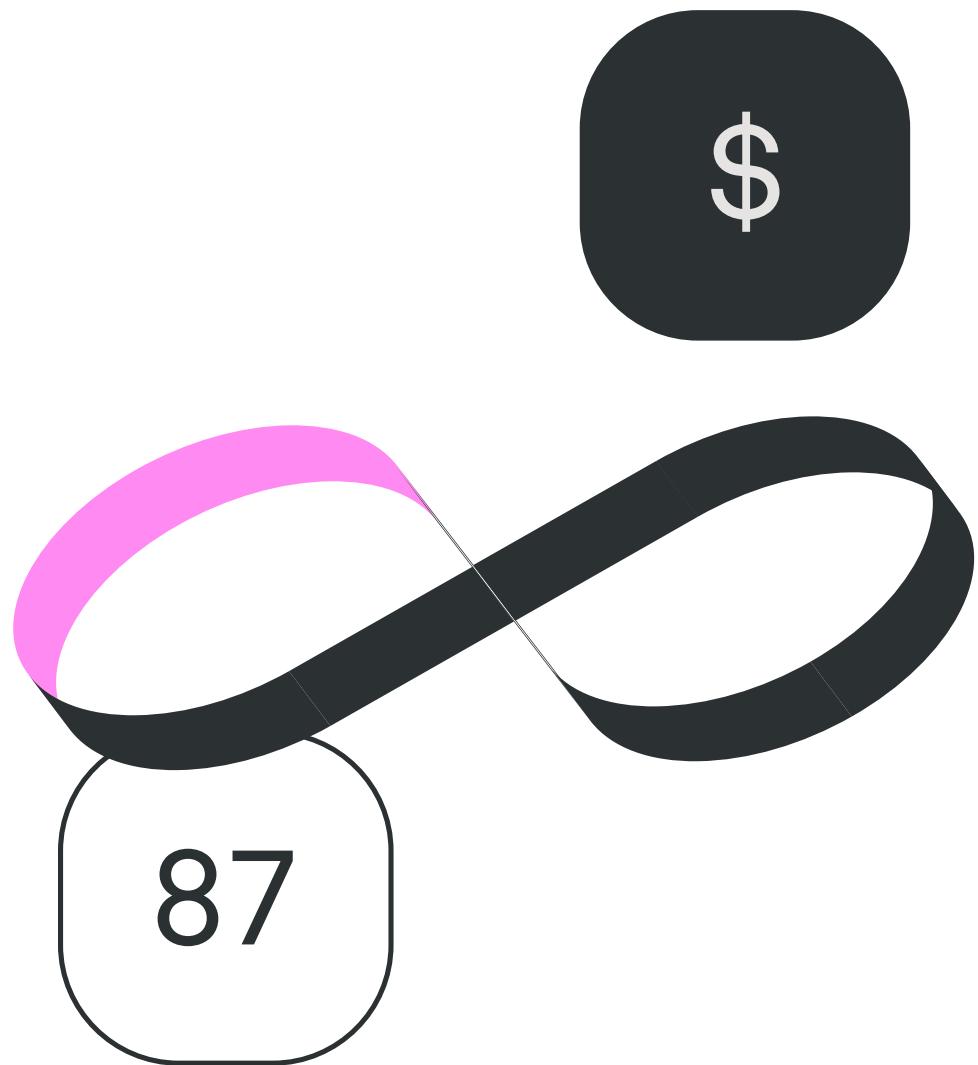
15k entities

HP service desk | Salesforce Desk | Zoho Desk | Freshdesk |
ServiceNow | Hybris | SysAid | BPM online...

L1 Operator Smart Routing

100k tickets analyzed

Banking



250

Intents
has been mined

120k Dialogues
has been analyzed

10k

domain entities
has been detected

30k

Trained
datasets

1.3m

Users' written
answers has been
used in dialog design

50

Business use
cases identified
and designed for
RPA

\$16BN IS A GLOBAL VDA MARKET BY 2023 (45% CAGR)

Cloud SaaS

Flagship version of the product
with the most **fast updates**

Client is charged by monthly payments
→ Recurring revenue

On-Premises

Version for deploying the platform
to client servers → Customer DMZ

Detailed user and technical documentation for partners who will be engaged in implementation and customization

Hybrid Cloud

Version for deploying the platform
with **a hybrid structure** (services in our cloud and in the DMZ)

* While at the level of assumptions about the need for such a structure

0.1RUB / 1 text request
to the dialog service

Dialogue designer	5.000 RUB/month
Supervisor	5.000 RUB/month
Operator	2.800 RUB/month

About Chatme.ai

Chatme.ai Team



Sergey Shlykov

CEO & CO-FOUNDER

12 years in top management, VC, Consulting Advisory |
Co-founder at Junglejobs.ru, north.ai – HR Tech | HSE



Vladimir Dyubanov (PhD)

BIG DATA EXPERT & CO-FOUNDER

18 years in machine learning, Deep learning, Big data |
Founder at Expasoft – Big data & ML consulting | NSU

**Denis Bragin**

IT TEAM LEAD

10 years in commercial & Scientific software development |
Successful B2B / B2C highload IT projects | NSU

**Dmitriy Lupov**

AI TEAM LEAD

9 years in applied and pure math, Computer science & NLP |
Author of education courses for machine learning | NSU

**Sergey Alyamkin (PhD)**

HEAD OF VOICE TECHNOLOGIES

9+ years in automated systems engineering, Neural
systems technologies | NSU

7

ML / DL experts in NLP, voice
technologies and data
engineering

9

back-end and front-end
programmers taking part
in platform development

3

business analysts focused on
deep understanding of business
processes for the purpose of
dialog system implementation

2

dialog designers with math
linguistic background for build-
ing a conversational UI of dialog
agents

Our achievements

Chatme.ai is focused on the development of smart conversational agents for the purpose of automating routine business processes.

250+

goal oriented & FAQ agents created

800+

intents have been detected from clients's datasets

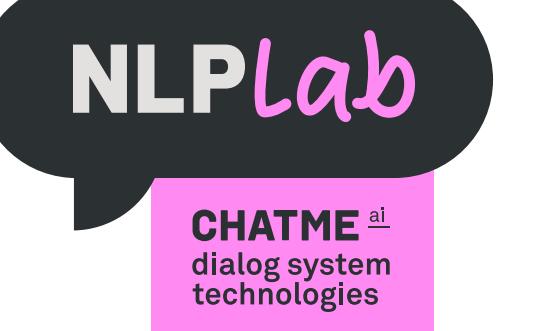
5,5m

dialog sessions analysed

3,5m

interactions executed

N* Novosibirsk State University
*THE REAL SCIENCE



HUMAN

Awareness

- Current understanding of the world based on the memory and experience

Memory

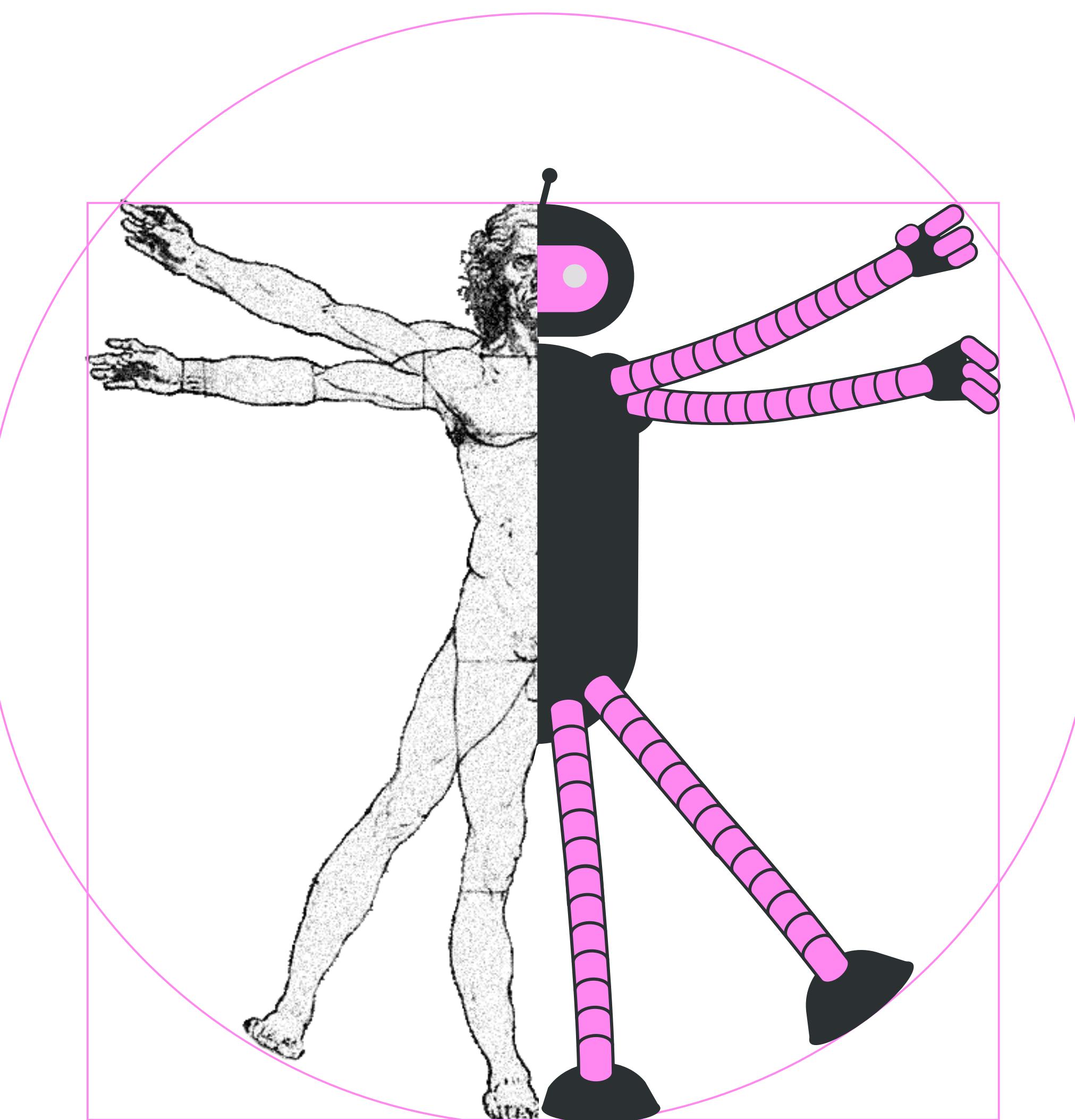
- Save and replay your living experience and impressions

Experience

- Practical complex of knowledge, skills, facilities

Unawareness

- Intuitivity, spontaneity, instinctiveness...



AGENT

Awareness

- process of understanding the human and execution of human needs based on the puzzle match of memory and experience (dialog pattern)

Memory

- complex of short term and long term entities collected from the communication with user

Experience

- skills based on dialog patterns which consist on task, problem, limitations, result. Agent is always checking the experience and use it.

Unawareness

- aggregate sources of knowledge which could be statistically processed by machine. If there is a lack of awareness we turn this approach to ad new experience

Thank you

Sergey Shlykov
CEO & Co-Founder

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