



THEPROPHETAI LIFE SCIENCE SERVICES WHITE PAPER



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TheProphetAI White Paper

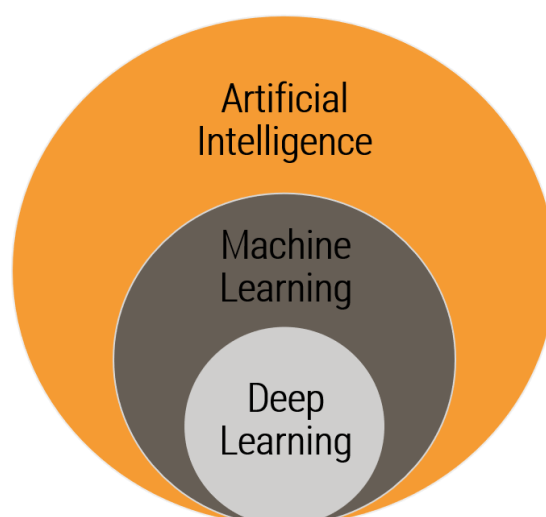
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1 What is “TheProphetAI” Artificial Intelligence Eco-System

1.1 What is Artificial Intelligence (AI)

Artificial intelligence (AI) is a wide-ranging branch of computer science concerned with building smart machines capable of performing tasks that typically require human intelligence. TheProphetAI is bringing AI into the Life Science market (antibodies, protein, Kits) exploiting techniques such as Machine Learning (ML) and Deep Learning. Machine learning is an AI subset and consists of techniques that enable computers to recognize patterns in data. These algorithms improve as they are exposed to more data over time. Deep Learning is the most advanced part of machine learning and it is changing our world. Technologies such as self-driving cars, intelligent robots and AI assistants are all example of Deep Learning Implementation.



1.2 Who is TheProphetAI (www.theprophetai.com)

TheProphetAI is an Innovative Start-Up, operative in Milan, who wants to bring the power of artificial intelligence in the life-science market. We offer several AI-based services to address solutions players in this market may need. We support biological reagent suppliers (and distributors) in better understanding their customer needs. On the other side, we also help researchers in this field during their job providing a free to use AI-powered web application that can be sponsored by companies.

We think that humans' unique skills combined with the capabilities of artificial intelligence will bring us to a new era.

TheProphetAI empowers its customers to exploit artificial intelligence to its fullest potential and opens new opportunities in the Life-Science market. If you are a manufacturer, supplier, or distributor of biological reagents, we have built different solutions for you.

We are a “ double Hybrid ” A.I. company that mix human competence and algorithms hybridizations to boost Life Science Companies sales by exploiting AI in order to predict current and future target to sell to customers. Our collaborations with the University of Messina and MIP-Politecnico di Milano allowed us to develop an even more robust system to enhance performance and results. Indeed, for the development of this new Innovative Start-up company TheProphetAI set an agreement with the business school of one of the main Technical University in Italy and Europe: MIP-Politecnico di Milano and the Dept. Biochemistry, Pharmaceutical Sciences of the University of Messina.

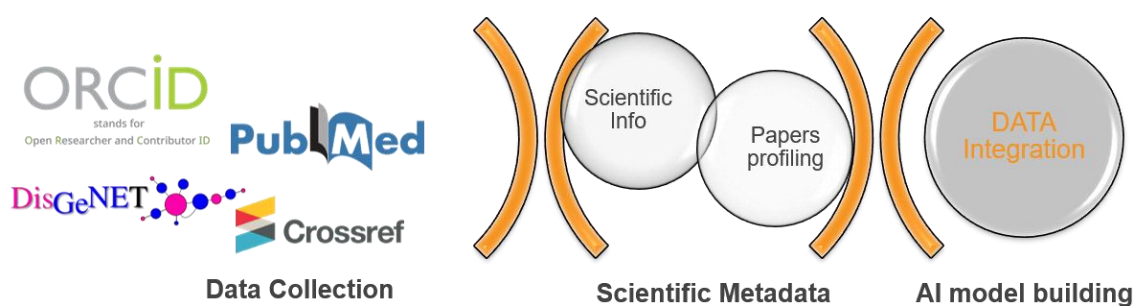
1.3 Our proprietary AI engine

TheProphetAI has a **proprietary neural network** scanning more than 15 million scientific articles and processing about 445 million interactions. This engine is able, given a set of genes and/or diseases related to the work of a specific researcher to suggest a new set of related genes that should be considered.

What we do is to squeeze the time every researcher is spending every day searching for the next target interaction.

We integrated data from several public DBs, such as PubMed and many Interactome Databases. Scientifically- based information on reagents and relationships among products has been integrated into the system to enhance recommendations.

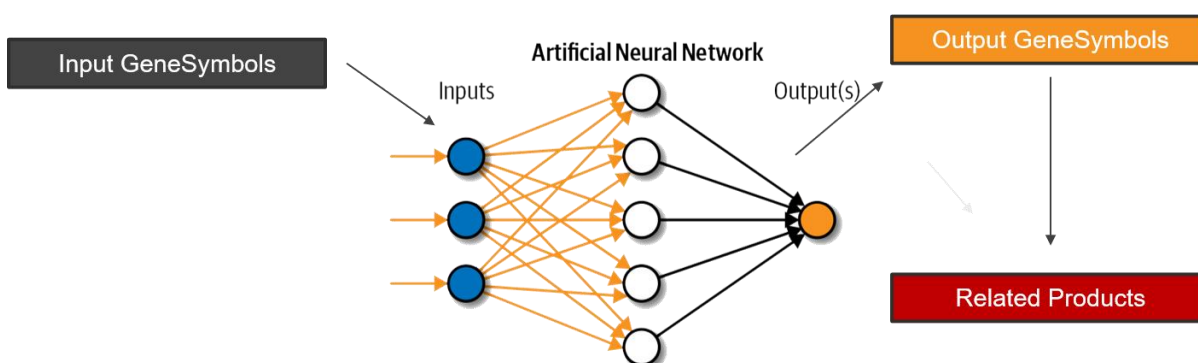
Building an Artificial Intelligent system based on a Deep Learning Neural Network has been complex, but what we give to our customers is an interactive, simple and user-friendly web portal.



In simple terms, our Neural Network takes a list of Gene-Symbols and/or some diseases as input and process it (using the Google power cloud) to predict a list of related Gene-Symbols that can be directly linked to your product catalogue.

Our current customers are increasing their turnover, enhancing their customer support and receiving great feedbacks from the final researchers.

Please refer to chapter 3 for the options available for your company



2 Main Objectives of the system

With the Artificial Intelligence systems developed by **TheProphetAI** you will be able to:



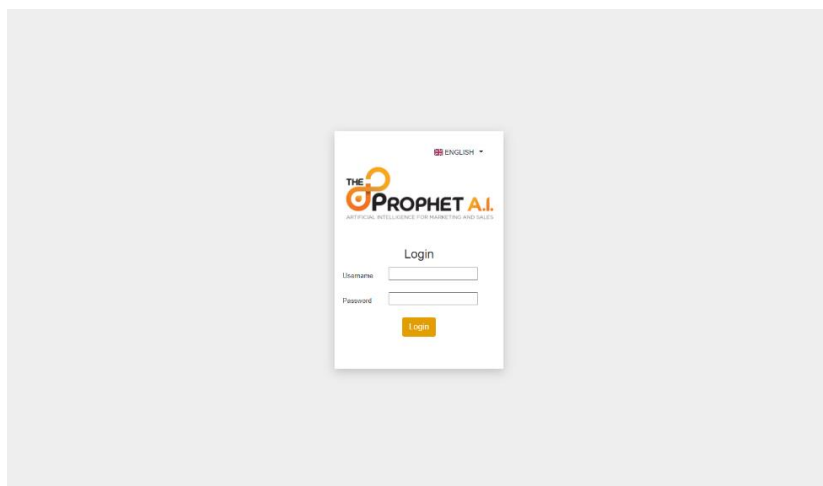
- Save time in studying customer profile, predicting its needs and knowing in advance **what to offer** (product codes!)
- **Bundle** different product when the customer is asking for a certain protein/antibody
- **Foresee the protein/antibody/kit ELISA** the customer will ask for in the future
- **Generate value** for researchers, your customers, thanks to ad hoc recommendations
- Acquire data on customers projects, used product and diseases they are working on.
- Increase your sales
- Find new customers
- Increase your brand awareness
- Increase your “stay-on-future mood” for your customers

3 Different Services

TheProphetAI main goal is always to create real value for its customer through a successful collaboration committed to innovation. For this reason, we developed different services among which you can choose the one that would more fit your needs. Thanks to its flexibility, we were able to exploit our artificial intelligence engine in many ways.

3.1 Real-Time - Service

It is our web-service application, supposed to be used by internal salesforces or customer service: people who usually have direct contact with customers. Any employee who has a license can log into the platform (<https://service.theprophetai.com/>) and perform A.I. requests to suggest to customers the most suitable products by inserting Gene-Symbols or product SKU (if integrated). The platform gives back a list of Gene-Symbols and a list of your products ready to be sent to the researchers (PDF or XLS) with your SKU and your web link.



More details about how to use the system will be given in chapter 5.

3.2 Bulk Services: We clean your data and assign GeneSymbols

If you want to retrieve recommendations for a large batch of your customers based on their past purchases and you are not confident with cleaning your sales stats and assign Gene-Symbols or IDProt we can do it. If you send to us the past purchases of the customers for which you want a recommendation, we will take care of every step. We need only a customer ID, not names.

Once processed, you will be able to retrieve recommendations for the Customers' ID you provided to us accessing the web platform. The AI is able in 95% of cases (customer) to create a recommendation. This is because for customers with a low number of interactions (sale rows) it is impossible to retrieve an accurate recommendation. The bulk service can be also used to easily access your customer past sales, add some more genes and obtain a live recommendation based on the combination.

3.3 Gene-Recommender (www.generecommender.com)

The GeneRecommender is a website dedicated to academic and public research; where a researcher can run recommendations typing some genes/disease he/she is studying. Public researchers can log in and insert the data about the research they are doing. **Your company can sponsor the website per country or per area for academic and public research.**

The sponsorship will include the possibility customize the website with your brand, increasing your brand awareness and the thrust your customer have on you and link your products (through your webshop) to each recommendation increasing your revenue with a limited investment.

Researchers can run five recs a day, and if they give permission (following GDPR) you can have details on customers, what they searched, what they obtain. In any case, when they find a gene useful to the research, your product will be shown on the page together with a direct link to your webshop. www.generecommender.com

The screenshot displays the 'Reports' dashboard of the GeneRecommender website. It features a navigation bar with 'DASHBOARD', 'NEW SEARCH', and 'SEARCH RESULTS'. The main content area is titled 'GENE RECOMMENDER SEARCH RESULT' and includes a 'SAVE THIS SEARCH' button. Below this, there are two sections: 'INPUT Genes' and 'TOP 5 AI Suggestions'. Each section contains a table with columns for 'GENE SYMBOL', 'ALIAS', 'APPROVED NAME', and 'ACTIONS'. The 'INPUT Genes' section shows three entries: cd200r, cd8a, and cd8b2. The 'TOP 5 AI Suggestions' section shows five entries: cd4, itg, cd8, and cd24. Each entry has a 'PRODUCTS' button with a list icon.

GENE SYMBOL	ALIAS	APPROVED NAME	ACTIONS
0 cd200r	cd200ra	CD200 receptor 1 like	ARTICLES PRODUCTS PRODUCTS SL
1 cd8a		CD8a molecule	ARTICLES PRODUCTS PRODUCTS SL
2 cd8b2	cd8bap	CD8b2 molecule	ARTICLES PRODUCTS PRODUCTS SL

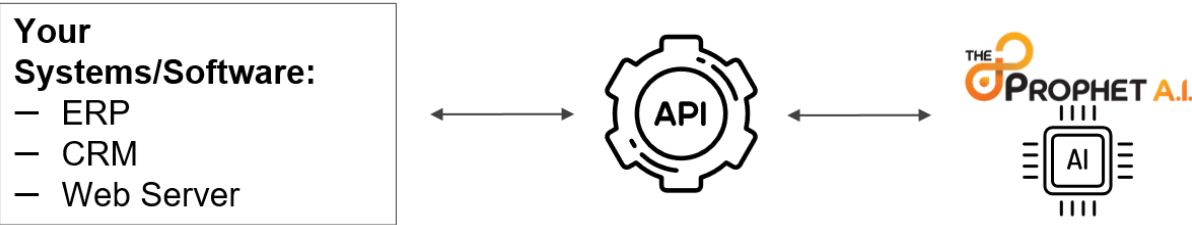
GENE SYMBOL	ALIAS	APPROVED NAME	ACTIONS
0 cd4		CD4 molecule	ARTICLES PRODUCTS PRODUCTS SL
1 itg	I-2tagf	Interleukin-2	ARTICLES PRODUCTS PRODUCTS SL
2 itg		Interferon gamma	ARTICLES PRODUCTS PRODUCTS SL
3 cd8		CD8 molecule	ARTICLES PRODUCTS PRODUCTS SL
4 cd24		CD24 molecule	ARTICLES PRODUCTS PRODUCTS SL

3.4 API Integration – Build your own application

APIs are highly standardized and “light” software intermediary that allows two applications to interact to each other. Easy to integrate, usually do not require significant investments

Our AI team developed a set of APIs that allows you to interact with the Artificial Intelligence system through an application programming interface. In simple words, you will be able to build your own application (Windows, Linux, Mac, Web, PowerApp ecc) based on our AI and even integrate our services in your website creating your personal GeneRecommender.

The API is based on the Swagger OpenAPI framework which is an industry-standard for RESTful API design. We can provide your developers with a YAML file that contains all the details about the interfaces and all the needed support to develop your own App exploiting TheProphetAI intelligent systems. www.swagger.io . Details about TheProphetAI APIs set will be given in chapter 10.



Your Systems/Software:

- ERP
- CRM
- Web Server


API

THE PROPHET A.I.





TheProphetAI LifeScience API v0.1-dev

[Base URL: /api/lifescience/v0.1-dev]
<https://btapi.theprophetai.com/api/lifescience/v0.1-dev/swagger.json>





Here you can put a general description of the API service.

Authorize 

recommend-service Recommend APIs

- POST /recommend/ 
- POST /recommend/batch/ 
- POST /recommend/batch/file/ 
- GET /recommend/byCustomer/ 

product-service Product APIs

- GET /product/search/basicinfo/bycode/ 
- GET /product/search/byGeneSymbol/ 
- GET /product/search/byGeneSymbol/xlsx/ 
- GET /product/search/bycode/ 

4 Privacy: Your Data Are Yours, and only yours

We believe in the importance of privacy. Data are “the new gold” and should be managed in the most careful way. We know how important are your data to you, for this reason, we ask you to provide **us only the essential data for the AI to work**.

We do not ask for any sensitive data about your customer or your company. For the Real-Time service, the GeneRecommender and the APIs integration TheProphetAI will process only your product list (if you need it) and the list of genes for which you ask a recommendation.

On one side the input gene list is necessary to make a prediction and, on the other side, the product portfolio is necessary to customize the output. Another possibility is to ask us to insert a default list of SKU of the most famous protein and antibody supplier.

Researchers using the GeneRecommender may decide, in compliance with the GDPR, to transfer their data to you for marketing purpose or not.

If you decide to ask for the bulk service with data cleaning and GeneSymbols assignments, we must process your sales statistics, but no data about your customer is needed with exception of a unique identifier, the SKU they bought and a time stamp. **Names, Addresses and any other sensitive information will be unnecessary for the system to work**. We will store and manage sales statistics with the highest safety standard not sharing them with anyone.

5 How to use the system

5.1 Use cases

As introduced in the previous paragraphs TheProphetAI's Artificial Intelligence ecosystem is meant to be flexible and meet different needs: hereafter, you can find some possible use cases to bring the power of Artificial Intelligence into your daily workflow minimising the adoption barriers and increasing the benefits. This list should not be considered exhaustive but can be a starting point to understand how to implement these systems.

5.1.1 Help Desk

Scenario 1

M: Hi, I'm Mario, can you please send a quote for Code XX123 and code XX124?

P: Yes sure, let me check, we have an innovative service based on AI... I found a related product to these two code XX345 and XX886, would you like to receive a report to investigate more? There are some genes here that you might consider! The Ai service is based on 16 million papers you are using every day to understand the better products to search for, so probably you can save time and money if you place a single order!

M: Yes thank you!

... a Few days later...

M: Hello, it's me, Mario! I received your report and together with the codes XX345 and XX886, I would like to have also XX400. I did not know that the YYY gene was in the pathway I am studying, and after receiving your report I had to study more.

Scenario 2

M: Hi, I'm Mario, can you please send a quote for Code XX123 and code XX124?

P: Yes sure, I have seen that last month you also bought XX999 and XX333, do you need XX123 and XX124 for the same research?

M: Yes, but why are you asking this?

P: Well, we have an innovative Artificial Intelligence system that is able to suggest to you some more products related to some genes you might consider. Which pathology are you studying?

M: At the moment I am focusing on Alzheimer

P: Ok let me check! ...the AI is suggesting 5 genes you might consider YYY, HHH, LLL, PPP and III.

M: I am not interested in YYY, HHH and we already have all the reagents for LLL and PPP in the lab. But I have never heard about III.

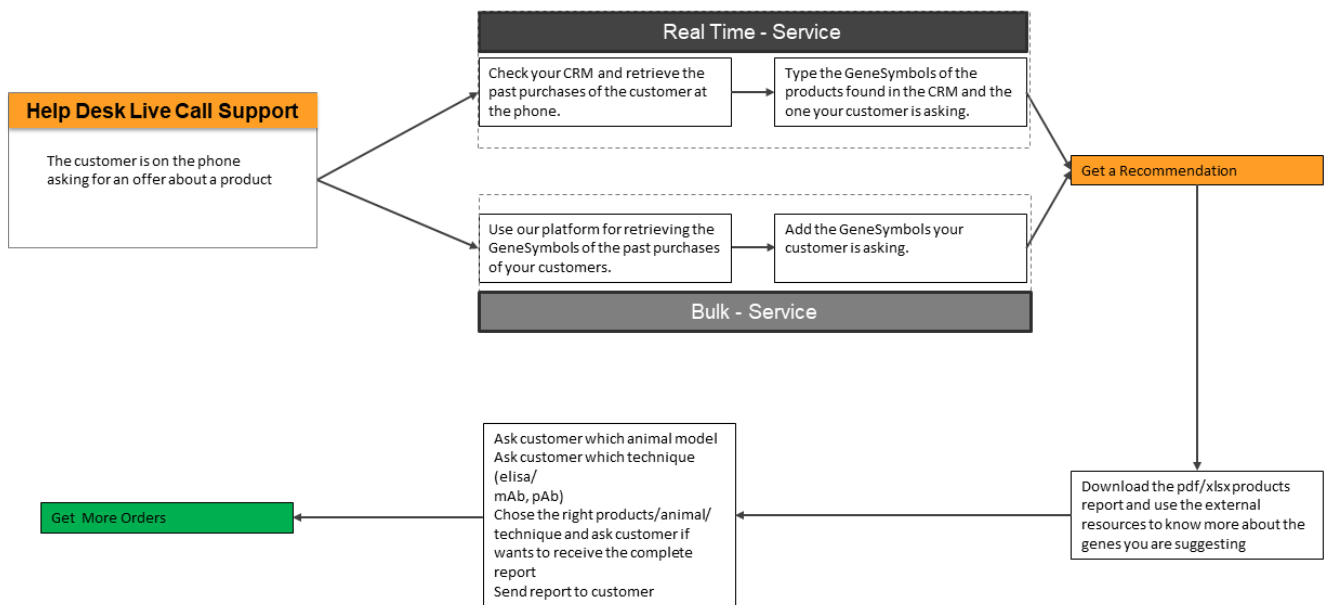
P: Here in the platform I have some links to have some more information about III, do you want me to share those links?

... a Few days later...

M: Hello, it's me, Mario! Thanks to your links I have found that there is a German University where they are studying the relationship between Ill and Alzheimer. I got in touch with them and now we will start a collaboration. In order to do this, I need some more reagents!

P: That's amazing, what do you need?

....



5.1.2 Sales Team

T: Hi John, I need your help!! I have this customer to visit tomorrow, and I don't know how to prepare. It used to be Nadia's job, but now that she left I am struggling.

J: Don't worry Tim we have the new AI system.

T: Yeah, I know, but that's Artificial Intelligence. It cannot be easy to use, and I have not time.

J: Absolutely not! Enter the platform and search for the customer ID, it should be 222111. You will get the past purchased genes and some suggestion about what they might be interested in.

T: That's nice! But if they ask me something new tomorrow, how can I manage it?

J: Well you can insert more genes in real-time and get a further recommendation. With the downloadable list of products and the external resources, you will be able to work with the customer and find the best products for him!

T: Thank you, John! That was the first good news of the day!

...The day after...

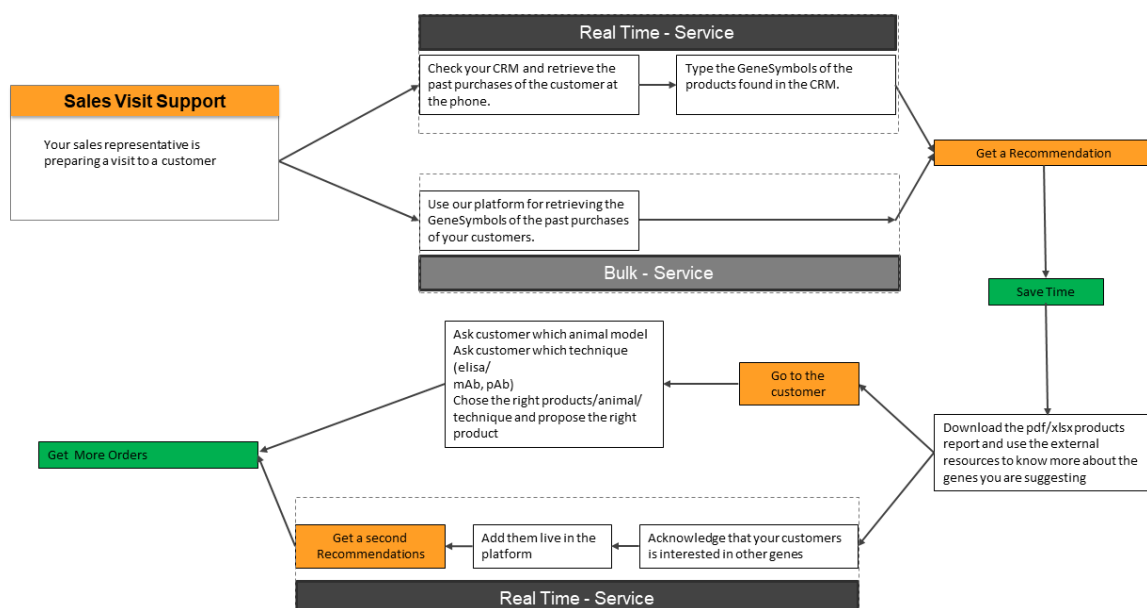
J: Hi Tim, how was yesterday?

T: That tool is great!! I was able to get a huge order. The only problem is that now they want to use the AI tool as well to get suggestions for their research.

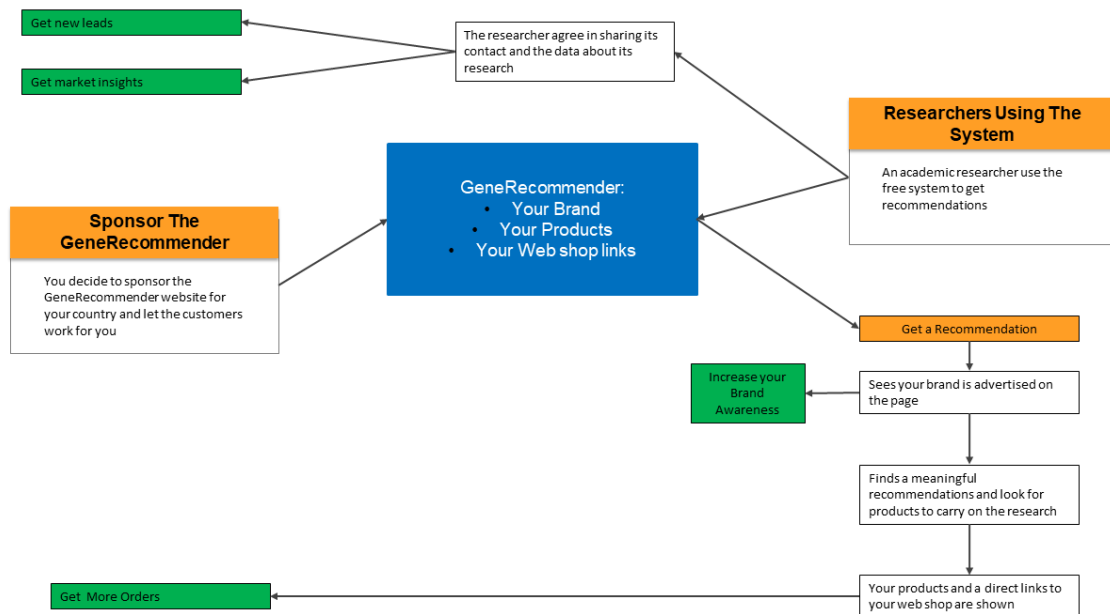
J: Hahaha, they are lucky! Our company is sponsoring the software for our country.

T: What does it mean?

J: Basically, there is a similar version of the AI tool that can be used for free by academic researchers. Together with the gene prediction, they get a list of our related products, and we make money without working...



5.1.3 Let the customer do the work for you (GeneRecommender)



Sponsoring the GeneRecommender in a country can be a great opportunity to increase sales both for reagents suppliers and distributors. Your customers will interact with the system autonomously and you will be able to increase the traffic on your webshop.

Instead of investing in costly advertising campaigns that do not provide value for your customers, you can provide them with an advantageous tool that they will use in their work while increasing your revenues and brand awareness.

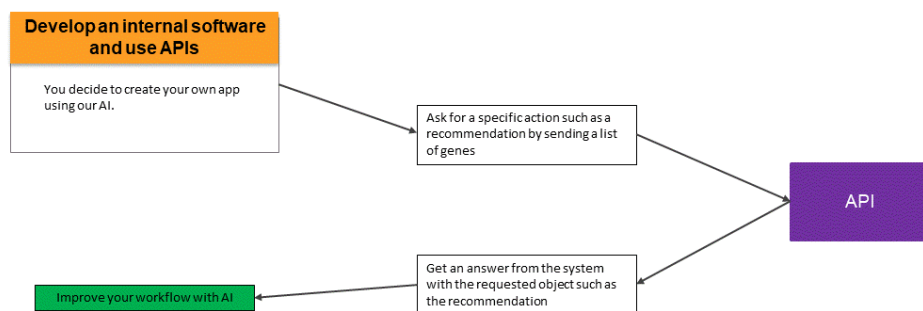
Thanks to the GeneRecommender you will be able to effectively exploit AI, without changing your internal workflow.

5.1.4 How to automate the system: Make your app using our APIs

If you want to have an even more personalised service you can decide to implement our Artificial Intelligence through APIs. Some possible implementations are:

- Link your **CRM** to the AI and send automatically tailored recommendation each time a customer is asking for an offer
- Link your CRM and **web server** to the AI send automatically tailored recommendation each time a customer is visiting specific products on your website
- Link any internally **developed software** that your sales force is using to our systems
- Create **your own GeneRecommender** inside your website and let the customers work for you
- Insert **AI in your marketing funnels** to improve your performance

The standard we use is commonly used and your internal IT department or external providers will be able to interact with the Artificial Intelligence. We will provide the computational power to run the Artificial Intelligence and the data that you will share are the only ones used for the recommendation (list of genes).



If you need assistance in the development, we can help and also, we can give you a third party who can develop the web application with all your data and our APIs.

5.2 Communication ideas

The introduction of an Artificial Intelligent system in a company can represent a real competitive advantage. In order to exploit the full potential of these technologies, the adoption of AI should be communicated internally and externally in the most appropriate way.

AI cannot substitute humans in their job but can help and support them in their daily tasks improving efficiency and effectiveness. **Predictions made by an Artificial Intelligence system are not always right but represent a valuable starting point to solve specific problems.**

At TheProphetAI we believe that the real potential lay in the cooperation between humans and machines (double hybrid!). Recommendations obtained from the AI engine should be analysed by experts/sales representatives (and customers of course) and processed together with the final customer in order to suggest the most suitable products. TheProphetAI technologies will reduce your costs, increase your sales and automate some of the processes in your company but will not substitute your workforce.

We will support you in this process with training, workshop and informative material.

5.3 How to check recommendations

We have some tools to help you explain the results to your customer, but keep in mind we humans are using AI because we are not able to calculate such data!

There are some good points to consider:

your customers are using scientific literature to understand better their research, and they want to understand what the scientific community has already done: we are using the same data elaborated by a powerful neural network who learned what the scientific community has already studied and tested in the past.

One of the most rated questions is “are the result correct?” Not every time, it can depend on your customer research, on the data we are using and many other variables. The bright side is that the companies who are using now **TheProphetAI's systems** are increasing their revenues even by 15-20% by combining AI suggestions and human evaluation.

6 The Output of the AI system

6.1 Different Services different Outputs

TheProphetAI developed an extensive ecosystem of services with the aim of satisfying the needs that different players in the market might have. Even if all the services are based on the same AI engine running in the back-end the output you will obtain is quite different.

6.1.1 The output of the Real-Time - Service

The real-time system exposes to the user a clear output that can be used by the Sales Team or the Help Desk team to propose the right product to the right customer.

THE POWER OF ARTIFICIAL INTELLIGENCE IN THE LIFE-SCIENCE MARKET info@theprophetai.com - Milan, Italy

THE PROPHET AI
ARTIFICIAL INTELLIGENCE FOR PHARMACEUTICALS AND BIOTECH

HOME STATS LOGOUT ENGLISH

SEARCH BY CUSTOMER BY USED GENES BY USED GENES AND DISEASES

Products: type product code to search...

Other used genes: type gene symbol to search...

Diseases: alz

Recommendations:

- OMIM:615590 - ALZHEIMER DISEASE 18
- C563834 - Alzheimer Disease 9
- OMIM:615711 - ALZHEIMER DISEASE 19
- C567000 - Alzheimer Disease 13
- C566299 - Alzheimer Disease, Early-Onset, With Cerebral Amyloid Angiopathy
- C564622 - Alzheimer Disease 8

Code

Product code

search

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Inserting the genes and the diseases related to the research your customer is doing, you will obtain the number of suggested genes that you prefer.

Products: type product code to search...

Other used genes: type gene symbol to search...

Diseases: type disease to search...

Recommendations: 5

Code

Product code	Product name	Gene Symbol	Alias	Approved name

Other used Genes, comma-separated - 08

Diseases - OMIM:615590

to genes linked to this disease

to other diseases

to other diseases

Approved symbol	Approved name	Single use link and SKI report
ctsp	Creactive protein	View PubMed publications Links
tcf	tumor necrosis factor	View PubMed publications Links
il2b	interleukin 2 beta	View PubMed publications Links
cxcl8	C-X-C motif chemokine ligand 8	View PubMed publications Links
il2a	interleukin 2 alpha	View PubMed publications Links

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Annotations: A (to genes linked to this disease), B (to other diseases), C (View PubMed publications Links)

At this stage, in the platform, you will find the list of gene symbols suggested by the Neural Network together with their Official Approved Name (A). Due to the fact that your Sales representatives, and also the customer, may not be confident with the suggested gene, the platform provides a list of useful web resources that can help in better understanding the suggestions. (B) These resources are external direct links to the most famous and widely used free online platform.

Target Validation
Target Validation associations
Open targets
GeneCards
PubMed
PMC
Clinical Trials
BioRxiv
Nature
sciencedirect
AllLibrary
NICE
TRIP
Google Scholar
Cochrane Library

After studying the suggestion, the next step is to propose to the customer the right products. With the Real-Time – Service we are able to integrate your product portfolio in our systems (or upload a default one) to be directly retrieved after the suggestion. All the products related to the suggested genes will be proposed in .pdf and .xlsx format (C).

TheprophetAI recommendation						
	Rec made by					
	Rec date		12/5/21			
	Recommended genes	aicda, pth, tnfrsf11b, smg1, crp				
Gene/Protein	ProductIDProt	Product type	Code/SKU	Name	Supplier	WebLink
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	119-16009	Rabbit Anti-Human AICDA / AID (N-Terminus)	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	129-10001	Rat anti-Human AID	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	144-12372-100	Rabbit anti-Mouse AICDA Ab	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	144-12372-200	Rabbit anti-Mouse AICDA Ab	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	144-12372-50	Rabbit anti-Mouse AICDA Ab	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	144-64213-100	Rabbit anti-Mouse AICDA Ab	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	144-64213-200	Rabbit anti-Mouse AICDA Ab	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	144-64213-50	Rabbit anti-Mouse AICDA Ab	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab137397	Rabbit pAb to AICDA - N-Terminal	Abcam	http://www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab169522	Rat mAb Clone:mAID-2 to AICDA	Abcam	http://www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab183618	Rabbit pAb to AICDA	Abcam	http://www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab252813	Rat mAb Clone:5G9 to AICDA	Abcam	www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab255769	Rat mAb Clone:5G9 to AICDA - BSA and Azide free	Abcam	www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab269454	RabMab Rabbit mAb Clone:EPR23436-45 to AICDA - CHIP Grade	Abcam	www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab269454	RabMab Rabbit mAb Clone:EPR23436-45 to AICDA - CHIP Grade	Abcam	www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab269457	RabMab Rabbit mAb Clone:EPR23436-45 to AICDA - CHIP Grade - BSA and Azide free	Abcam	www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab5197	Rabbit pAb to AICDA - CHIP Grade	Abcam	http://www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab59361	Rabbit pAb to AICDA	Abcam	http://www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ab93596	Rabbit pAb to AICDA	Abcam	http://www.abcam.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	ds-pb-02385	Rabbit anti-Human AID (C-term)	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	er-14-0108	Goat Anti-Human AID, (N Terminus)	RayBiotech	https://www.raybiotech.com
aicda (activation induced cytidine deaminase)	Q9GZK7	Ab	gtx104662	AICDA Ab (NIN2), N-term	GeneTex	https://www.genetex.com

In this way, understanding which is the correct animal model, the correct technique etc. your Sales Team or the Help Desk team will be able to easily find what matches your customer needs, proposing innovative solutions, improving its bundling capabilities while saving time.

The .pdf includes all the link to external resources, the aliases of the genes (keep in mind that the official name might not be familiar to your customers) and the links of the products on your webshop.

The .pdf is customizable, and it is designed to be sent directly to the customer.

Gene	Approved Name
fgf3	fibroblast growth factor 3
	Also know as: hbgf-3,int2
wnt3	Wnt family member 3
	Also know as: int4,mgc131950,mgc138321,mgc138323
ints5	integrator complex subunit 5
	Also know as: int5,kiaa1698
apc	APC regulator of WNT signaling pathway
	Also know as: dp2,dp2.5,dp3,ppp1r46
notch4	notch receptor 4
	Also know as: int3

fgf3	
Target Validation	Link
Target Validation - Associations	Link
GeneCards	Link
PubMed	Link
PMC	Link
Clinical Trials	Link
BiorXiv	Link
Nature	Link
ScienceDirect	Link
AllLibrary	Link
NICE	Link
TRIP	Link
Google Scholar	Link
Cochrane Library	Link
Genesymbol Embedding Projector	Link
GeneMANIA	Link
Reactome	Link

Category	Supplier	SKU	Description	Link
apc	APC regulator of WNT signaling pathway			
Antibody	Abcam		Rabbit pAb to APC	Link
Antibody	Abcam		Rabbit pAb to APC	Link
Antibody	Abcam		Rabbit pAb to APC	Link
Antibody	Abcam		RabmAb Rabbit mAb (clone EP701Y) to APC - BSA and Azide free	Link
Antibody	Abcam		RabMab Rabbit mAb Clone:EP701Y to APC - BSA and Azide free	Link
Antibody	Abcam		Rabbit pAb to APC -Cterminal-	Link
Antibody	Abcam		RabMab Rabbit mAb Clone:EP701Y to APC	Link
Antibody	Abcam		Mouse mAb Clone:CC-1 to APC	Link
Antibody	Abcam		Rabbit pAb to APC	Link
Antibody	Abcam		Rabbit pAb to APC	Link
Antibody	Abcam		Mouse mAb Clone:ALi 12-28 to APC	Link
Antibody	GeneTex		DP2 Ab (N2C1), Internal	Link

6.1.2 The output of the Bulk

If you decide to implement the Bulk service for your company, you will be able to search inside the platform using the customer ID. The web platform will display automatically the recommendation related to the given customer, considering its past purchases.

SEARCH BY CUSTOMER BY USED GENES BY USED GENES AND DISEASES

Customer name 1 Customer name 2

Customer name 3 Customer name 4

Search by Customer

Once retrieved the recommendation will be possible to ask for a second one adding more genes.

6.1.3 The output if I sponsor the GeneRecommender

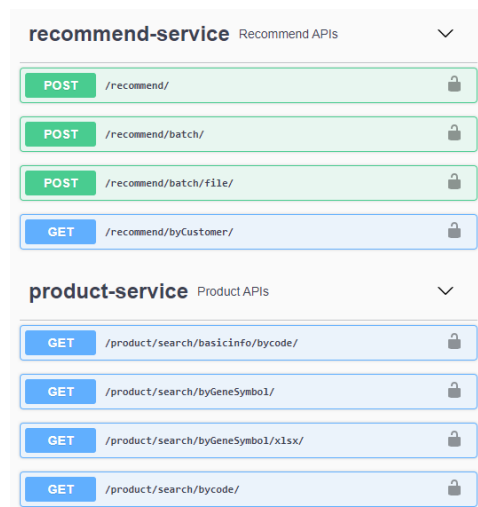
If you decide to sponsor the GeneRecommender your customers will have access to the www.generecommender.com platform. TheProphetAI will provide you with monthly updates about the activity of the researchers (who decided to share their data according to the GDPR) that operates in your country.

In details you will receive:

- Usage Statistics
- Trends
- New leads contact information

6.1.4 What I can get from API

If you want to develop your own application using our Artificial Intelligence we will support you in this process. Every feature that you can find in the other services is here available through API endpoints.



Method	Endpoint	Auth
recommend-service Recommend APIs		
POST	/recommend/	🔒
POST	/recommend/batch/	🔒
POST	/recommend/batch/file/	🔒
GET	/recommend/byCustomer/	🔒
product-service Product APIs		
GET	/product/search/basicinfo/bycode/	🔒
GET	/product/search/byGeneSymbol/	🔒
GET	/product/search/byGeneSymbol/x1sX/	🔒
GET	/product/search/bycode/	🔒

Your technician will know how to develop the integration by calling our APIs and managing the answers. In this case, the AI engine will provide you with all the answer in standard data format JSON/CSV easy to handle and to integrate into CRMs and ERPs.

```
JSON
{
  "genesymbol": "apex2",
  "products": [
    {
      "supplier": "RayBiotech",
      "sponsor_sku": "RB144-64114-100",
      "supplier_sku": "144-64114-100",
      "description": "Rabbit anti-APEX2 Ab",
      "genesymbol": "apex2",
      "approvedname": "apurinic/apyrimidinic endodeoxyribonuclease 2",
      "sponsor_web_link": "https://ricerca.prodottigianni.com/ricerca-scheda-prodotto/RB144-64114-100.html"
    },
    {
      "supplier": "RayBiotech",
      "sponsor_sku": "RB144-64114-200",
      "supplier_sku": "144-64114-200",
      "description": "Rabbit anti-APEX2 Ab",
      "genesymbol": "apex2",
      "approvedname": "apurinic/apyrimidinic endodeoxyribonuclease 2",
      "sponsor_web_link": "https://ricerca.prodottigianni.com/ricerca-scheda-prodotto/RB144-64114-200.html"
    },
    {
      "supplier": "RayBiotech",
      "sponsor_sku": "RB144-64114-50",
      "supplier_sku": "144-64114-50",
      "description": "Rabbit anti-APEX2 Ab",
      "genesymbol": "apex2",
      "approvedname": "apurinic/apyrimidinic endodeoxyribonuclease 2",
      "sponsor_web_link": "https://ricerca.prodottigianni.com/ricerca-scheda-prodotto/RB144-64114-50.html"
    },
    {
      "supplier": "Abcam",
      "sponsor_sku": "AMab266558-1e+006cel",
      "supplier_sku": "ab266558",
      "description": "Human APEX2 knockout HEK293T cell line",
      "genesymbol": "apex2",
      "approvedname": "apurinic/apyrimidinic endodeoxyribonuclease 2",
      "sponsor_web_link": "https://ricerca.prodottigianni.com/ricerca-scheda-prodotto/AMab266558-1e+006cel.html"
    }
  ]
}
```

6.2 How to work with a large products' portfolio

One of the main issues encountered by companies that decide to adopt our artificial intelligence is related to the large amount of product related to each GeneSymbol and retrieved by the platform.

As previously state, we believe that the real potential of AI lay in the collaboration with humans and machine and, for this reason, the product list generated by the platform should be analysed by the sales representative, together with the customer, to shortlist the right items to offer.

In the case, your portfolio is too large to be easily managed an option can be to select some specific product to upload. If you are a distributor, for example, you can choose to include in the platform only a subset of the supplier you represent. The rationale behind this decision might be to select the minimum number of suppliers that can cover the whole spectrum of products that your customer might need.

7 A successful implementation

Since its inception, TheProphetAI started collaborating with a famous Italian Protein and Antibody distributor, Prodotti Gianni. This company decided to fully adopt the Artificial Intelligence system provided by TheProphetAI and integrate these services in its daily workflow.

The company have a webshop, where customer can buy products, and help desk, for information and after-sales support, and some sales representatives, across Italy, that regularly meet researchers in different laboratories.

Prodotti Gianni implemented artificial intelligence at different levels within the company, adopting a gradual and constant approach. The following measure has been taken:

- Each sales representative and help desk employee have a Real-Time service account
- All the customer's purchases of the last three years have been processed by the AI with the Bulk service
- Prodotti Gianni is sponsoring the GeneRecommender for Italy
- API integration between the company's CRM and the AI has been built, to automate the recommendation process.

Thank to this implementation Prodotti Gianni is able to:

- Assist customers proposing new product and bundling each time someone asks for a product
- Send automatic recommendations together with any new quote by email
- Sales Representatives use AI to propose customers the most appropriate products saving time in studying
- Get new orders from the GeneRecommender while enhancing the perception of its brand among potential customers
- Get new prospect to contact coming from the GeneRecommender