

Avataris GmbH
Lange Gasse 30/2/11
8010 Graz, Austria
VAT: ATU74763446
Company No.: 518133k
<https://avataris.io>
request@avataris.io



Michael Schöggel (CEO)
0043 664 75076303
michael@avataris.io

Avataris: Chatbot Developments

The following information does not constitute a binding offer but is intended solely for informational purposes and as rough estimates to better understand the potential development services of Avataris GmbH related to Digital Humans or modern chatbots. We are not bound by, nor do we guarantee, any possible errors, (very likely) changes, or time-limited information (rapidly evolving market or technology). We kindly request that you treat this document and the information contained therein as confidential and do not disclose it publicly.

Fixed Price, Additional Costs, and Payment Method

Currently, we only offer chatbot solutions at a fixed price. In the near future, we are also considering a "Do-It-Yourself" construction system through a web platform. The new business model would involve a fee per user-AI/server interaction, which could quickly result in higher costs than the fixed price offer. Existing customers can remain in the fixed price offer without any additional costs from our side.

The only (optional) additional costs to the fixed price should be (without guarantee of completeness):

- Third-Party Costs:** If a third-party AI solution provider (such as OpenAI for GPT-3.5 or GPT-4) is used, the customer is responsible for these costs (own account, own billing). The exact costs depend on the provider, and for OpenAI, they can be found [here](#). If you want to create a chatbot that can respond not only in text but also with voices (classic old-fashioned chatbot where everything is in writing), you would also incur additional costs for a text-to-speech solution like ElevenLabs (best quality on the market) for creating voices based on the texts (audio files). The costs for ElevenLabs can be found [here](#).
One of our key unique selling points is that we focus on local AI solutions on the user's device and pre-trained or created data (e.g., question-answers), which can reduce up to 95% of the costs for third-party AI solutions. If you don't save costs with our special solution, you would need to budget approximately \$10,800 per year for GPT-4 if you have a (fictional) customer active around the clock (concurrent users or CCU). Thanks to our solution, these costs should be reduced to around \$540 (5%) per CCU per year. For ElevenLabs' voices, you would need to budget around \$54,000 per CCU per year if you don't receive any special volume discounts (the calculation already considers ElevenLabs' cheapest official package). In total, for GPT-4 and ElevenLabs, you would need to budget approximately \$64,800 per year per CCU without receiving any chatbot development or Digital Humans. For detailed calculations, please visit our [pricing](#) page and read the corresponding tooltips.
You can best estimate the number of simultaneous active customers (CCUs) you expect and the percentage of customer AI requests that are likely to be new for each customer (e.g., off-topic small talk) versus those that can be prepared in advance and then, using our special solution, cause only a few percent of the original costs. We estimate that approximately 5% of all AI conversations cannot be prepared, and our solution will save you 95% of these approximately \$64,800 per CCU per year, which means about \$3,240 per CCU per year will remain for these AI third-party providers. However, we can also integrate other, cheaper third-party providers for your chatbot, but that would be associated with extra costs at a rate of €50 to €100 per hour.
- Server Costs:** For chatbots that can handle more than just simple questions, such as collecting data or enabling personalized customer support (database integration), it is necessary to create our solution on your (newly set up) server. Typically, you already have a server, but in some cases, it may be beneficial or necessary to rent one or more additional servers. This is especially true when many users need simultaneous access to the chatbot solution, and these interactions cannot be handled locally on the user's device, requiring data exchange or calculations from a server. We develop our solution on your servers so

that you have full control, can guarantee modern data privacy to your customers, and remain completely independent from us. However, you are responsible for paying for these servers. Usually, these costs are negligible and amount to approximately €200 per month per server, which should be sufficient for several hundred to a thousand users with our solution (the exact numbers depend on your application). In contrast, competitors that rely on generating a 2D video per user request/interaction (such as Synthesia, D-ID, etc.) allow fewer customers per server, which is reflected in their cost structure. This is because, unlike us, these providers perform the actual work of the chatbot (e.g., facial expressions, gestures, or mimics of the Digital Human) only on the server, which then sends the (video) result to the user.

3. **Maintenance Costs and Updates:** In the field of AI, there is rapid development, and as AI and technology enthusiasts, we always test the latest solutions as soon as they become available. If you also want to use the latest (AI) solutions, we can perform the necessary updates for you, or you can handle them yourself. The effort involved is generally minimal but depends on too many factors to be quantified definitively. For updates or maintenance tasks that you prefer us to handle instead of doing them yourself, we will charge new work based on an agreed estimated effort at an hourly rate of €50 to €100.
4. **Your Effort:** Depending on how you intend to use our solution, we will require varying amounts of information from you, which you may not have prepared yet. Data sets from databases, for example, can be automatically extracted through interfaces (APIs) that we use or can develop. Many user questions and answers can be generated automatically for you by AI models like GPT-4. However, in some cases, someone from your team will need to invest time in reviewing and potentially correcting these AI-generated answers or providing additional information that cannot be answered solely based on logic. The costs for the time spent by your team will vary depending on the use case and quality requirements. Our Digital Humans continuously learn from customer feedback. For example, AI-generated answers marked as incorrect or unsatisfactory by multiple customers are reviewed and corrected by you, saving you the effort of screening all pre-prepared AI answers. However, if you have extremely high quality requirements because incorrect AI-generated answers could cause significant damage, you may want to review all AI-generated answers before their publication. The effort required from your side depends on many factors determined by your own requirements. Furthermore, we will need one or more direct points of contact in your team who can provide us with timely technical and content-related information and, for example, set up time-limited access to a (separated) part of your server (such as a dedicated Docker container) or a new server, allowing us to set up our solution there and link it to your APIs or databases. We develop everything directly on your server from the beginning because each customer has slightly different requirements. We want to avoid any unpleasant surprises later on and therefore test everything in the same development environment that will be used in the live version.

Total Cost: The amount of the fixed price depends on the scope of your solution and our estimated effort. Based on your information (and possibly a requirements specification), we will provide you with a binding offer. Our basic package costs €50,000 and includes all the essential technologies necessary for a simple Digital Human chatbot on your webpage (see below). For all other project-specific developments, we require an estimation of effort, which can only be determined once we have more detailed information. However, you can expect an hourly rate of approximately €50 to €100, which is significantly lower than what traditional IT service providers charge.

Payment Method: As a startup that has invested years and significant expenses in developing our globally unique technology, we cannot bear the risk of a customer potentially being unable or unwilling to pay, while tying up our limited financial and human resources for months. This scenario would be too easy for a competitor to disrupt our business, and even without malicious intent, it could happen during challenging economic times. Therefore, depending on the project size, an advance payment of 30% to 50% would be necessary. For smaller projects (up to €50,000), we would agree on a 50% advance payment and 50% upon completion. For medium or larger projects, it would be a 30% advance payment, 30% upon completion of the first prototype with all basic functionalities, and 30% upon satisfactory completion of all tasks. To demonstrate our capabilities and the functionality of our Digital Humans, we provide a dedicated [chatbot for testing](#) on our website, which is continuously updated, allowing you to get an initial impression.

Specific Requirements: In many cases, for the specific requirements of your project (e.g., integration with your APIs or databases or your specific web requirements, etc.), we may need to collaborate with additional freelancers (temporarily). We receive around 300-500 qualified applications from software developers per month and already have access to a large pool of known and motivated talent (generally around 3,000-7,000 applications per month for several years, with several thousand completing test tasks and demonstrating their skills). Although we can cover almost all requirements, we should discuss before starting the collaboration whether we will handle all tasks for you or if you have your own experts in certain areas and want to take care of specific tasks yourself. This also applies, for example, to designers for your company-specific user interface or application branding (we have two

highly talented designers) or other areas (such as character artists, character animators, story writers, sound designers, etc.).

Below is a specification of the scope of our basic package and a list of several optional developments that may be necessary or exciting for your use case. We also provide a rough estimate of time and cost as a guideline, but the actual effort may vary significantly based on the details of your requirements.

Basic Package for €50.000

1. **Digital Humans:** You will receive one custom Digital Human according to your requirements and preferences (including the virtual personality of the avatar), as well as the freedom to choose two additional Digital Humans from our existing repertoire. Any additional specially created Digital Human will cost €5000, and each additional use of pre-made characters will require a compensation fee of €1000 (this covers our costs for integrating and integrating them into your AI application). Voice (audio) is evaluated separately from Digital Humans (see below)!
2. **Voices:** We offer various pre-made voices in different languages (typically sourced from third-party providers). Our main task is converting predetermined dialogues into audio files for all supported languages and voices, which will be made available on the server (or in exceptional cases, as a download on the user's device).
The basic package includes one custom voice for your own Digital Human based on your requirements (the AI can be trained on audio references) and two pre-prepared voices. Voice selection is complex as not every voice is available for every language, and the effort scales with the number of supported languages and the amount of pre-prepared text. Therefore, we need to determine additional costs based on our effort (approximately €1000 per additional voice).
3. **Platform of Choice:** We develop applications for web browsers (compatible with almost all browsers except for outdated versions like Internet Explorer), as well as Android and iOS (iPhone) apps, or downloadable programs for Windows, Mac, and Linux. We can also accommodate special requests like PlayStation, Xbox, or VR/AR, essentially supporting almost all platforms that Unity supports.
However, for special requests, we need to assess whether all the technologies we use (based on the specific requirements) are available on the requested platform or would require significant additional effort to implement.
In general, supporting each new platform requires extra effort since user interfaces need to be adapted (or made responsive), and different technologies may be used in development (e.g., for microphone or shaders). Therefore, while we can support multiple platforms for an additional cost (see below), we recommend starting with one platform and adapting to others if needed later on. We will charge €15,000 for each additional traditional platform (Android, iOS, PC/Mac/Linux, Web), offer AR support for €9,000 (limited to a smartphone platform, either Android or iOS), and for PlayStation or Xbox, we need to determine the respective costs upon inquiry.
4. **Voice Control and User Interface for Communication:** The basic package includes the necessary functions and AI integrations to communicate with a Digital Human through both voice (requires a microphone, such as part of a webcam) and text input or a user interface (e.g., with an overview of suggested topics or questions). Audio speech recognition (without guarantee) is available for the following languages and can be expanded with additional effort if required. However, expanding the support for these languages may result in slower chatbot responses due to the potential need to supplement our local AI with server-based AI: Arabic, Brazilian Portuguese, Chinese, German, English, Farsi (Iran, Afghanistan, Tajikistan), French, Greek, Hindi (India, Nepal, Bangladesh, Mauritius), Indian English, Italian, Japanese, Kazakh, Catalan, Korean, Dutch, Filipino, Polish, Portuguese, Russian, Swedish, Spanish, Czech, Turkish, Ukrainian, and Vietnamese. All spoken sentences from the user are converted to text locally on the user's device without time or cost implications, as long as the user speaks clearly enough in one of the supported languages mentioned above.
5. **Translations:** In addition to the speech recognition mentioned earlier, users can select predetermined questions or topics from the user interface in many more languages (by clicking buttons) or ask their own questions in additional languages through text input. Additionally, all texts displayed within the application (e.g., in the user interface or chatbot responses) can be translated into almost any available language if needed. These extra languages either incur costs for us (as we need to automate the translation of all predetermined dialogues, texts, and datasets into different languages and store them on the server or locally on the user's device, such as in a language pack) or alternatively, incur costs for a third-party live server translation service (e.g., using Google Translate). However, the latter option may result in a delay of a few seconds until the chatbot understands and responds to the question.
For live translations, you will be responsible for the associated costs of third-party translation services, which can become expensive with a large number of users. As part of the basic package, we offer two languages

of your choice for free, and each additional language will cost approximately €1000 (costs may be higher if the database of predetermined texts is unusually large).

In principle, we can offer any language that is available via an interface from any third-party provider, but we would need to integrate and use that API if necessary. We recommend using DeepL (and the languages available there) as DeepL achieves the highest translation quality. The supported languages include Bulgarian, Brazilian Portuguese, Chinese, Danish, German, Estonian, Finnish, French, Greek, Indonesian, Italian, Japanese, Korean, Latvian, Lithuanian, Dutch, Norwegian, Polish, Portuguese, Russian, Swedish, Spanish, Czech, Turkish, and Ukrainian.

6. Dialog Capability: As part of the basic package, we offer the generation of several hundred to thousands of question-answer pairs using AI (GPT-3.5/4) based on the texts and information you provide. After a quick check for quality and plausibility (without your domain-specific knowledge), this data is used to train our local AI and algorithms. This allows the chatbot to recognize and accurately answer the prepared questions (in different languages) without any delay. However, when a completely new question is asked by a user, an inquiry will be sent to a third-party AI (e.g., GPT-3.5/4), incurring costs for you (refer to our [pricing](#) page for an estimate).
7. Learning and Feedback System: Our basic package includes technological developments to keep the costs associated with third-party AI usage low. Either all newly generated question-answer pairs or only those that users have positively rated (thumbs up) are automatically added to the database of predetermined dialogues, reducing future costs. If a user rates a AI-generated answer (or a predetermined answer) negatively (thumbs down), you can review these marked answers with your team and make corrections and improvements if necessary. If users provide general feedback (e.g., constructive criticism), it can be sent directly to a system provided by you, such as a ticketing system (additional costs for this on an hourly basis should be minimal, likely under €5000), or it can be displayed within our user interface (for all questions and answers). We can provide additional learning and feedback systems (e.g., in the area of adapting the Digital Human's arguments, personality, or speaking style to individual users based on their known history or observed indicators, etc.), but these are unnecessary for most customers, require extra effort on our part, and are specific to the product. Therefore, they are not included in the basic package, and the costs depend on the specific solution and are calculated on an hourly basis.
8. Targeted Personalization: Included in the basic package is the option for users to switch virtual avatars with a simple button press if you have chosen more than one Digital Human. With different characters, we can offer various linguistic expressions and virtual personalities. This can be achieved through live rephrasing of existing predetermined dialogues using technologies like GPT-4, which incurs costs from third-party providers (with a one-time fee of €1000 per virtual personality). Alternatively, and preferably, we can generate all predetermined dialogues in different versions or formulations for each virtual personality (costing approximately €2000 per personality, potentially higher for large datasets). If you desire a more advanced system that recognizes the customer's identity through links, cookies, URLs, etc., and automatically adapts the chatbot to the customer without manual selection, we can provide this at an estimated cost of €35,000. This targeted customization includes the ability to change the 3D environment (which should ideally correspond to the respective Digital Human) and other audience-specific modifications to the application, such as voice, speaking style, virtual personality, etc. The integration of your own database for personalization, such as addressing the customer by name or utilizing their previous interactions (e.g., from email correspondence), would depend on the scope and would be billed on an hourly basis. However, the basic package includes 170 free developer hours for such tasks.
9. Realistic Avatars: Our focus is on creating realistic and lifelike avatars (hence the name "Avataris"). The basic package includes all the necessary features and technologies for this purpose: (1) Lip synchronization with spoken words, (2) context-based facial expressions based on an understanding of the emotions conveyed in the dialogues, (3) automatic animations for the entire body (e.g., hand and arm gestures), (4) the ability to navigate through the 3D environment without colliding with objects, (5) realistic gaze behavior, (6) automatic camera position changes based on emotions or situations (unless the user is in "free movement mode" where their head position defines the camera position), (7) sound, and (8) physics-based hair and clothing, if supported by the platform (typically available, even in web browsers, but performance costs of the entire application, such as the complexity of the environment and the number of avatars present, may vary).
We are continuously developing many improvements for avatars, such as realistic muscle and facial movements, micro-animations, and deformable skin, but these features are still in progress (see [link](#)). If these features can be supported by the user's device and add value to the application (e.g., complex muscle simulations may not be necessary for all use cases, but might be relevant for a fitness app that demonstrates exercises with muscle movements), they can be added at minimal self-costs.
10. 3D Environment: The basic package includes a pre-made 3D environment of your choice. However, if you want a custom 3D space that suits your specific needs and preferences (e.g., an office, fitness studio, bank, shop, etc.), we will need to charge approximately €10,000 for its creation (cost may vary depending on requirements). Additionally, we can provide three different lighting scenarios (e.g., day, night,

sunrise/sunset) and incorporate 3D models, textures, materials, labels, or signage specific to your brand (e.g., logo on the wall, themed 3D models, room colors reflecting your corporate design, etc.).

The development of the 3D environment also includes necessary optimizations for the platforms you intend to use to ensure optimal performance. It enables users to navigate through the environment using predefined camera positions or freely move around with an invisible virtual body. With predefined camera positions, users can switch between different locations in the virtual space quickly. This is especially useful when multiple virtual characters are present in different positions, each serving different functions.

This virtual environment provides numerous possibilities for gamification and visualizing functions beyond a simple chatbot. For example, it can simulate a virtual workspace to manage finances, offer virtual rewards like trophies or room upgrades for specific achievements, or provide visualizations of products that users can purchase or use in real life, such as in shopping applications. Any additional developments utilizing the vast opportunities of gamification beyond a basic yet attractive environment will incur extra costs based on the complexity and requirements. Our top-notch team of game designers, level designers, 3D artists, story writers, etc., specializing in game development, allows us to provide you with high-quality solutions at a unique price.

11. User Interface: The basic package includes an intuitive user interface that encompasses all the necessary and meaningful features: (1) Chat window displaying the chronological conversation history, (2) menu with basic settings for graphics, sound, music, language, etc., (3) subtitles (when the chat window is closed, focusing solely on voice input), (4) feedback option with thumbs-up or thumbs-down, where thumbs-down prompts the user for further specification (this feedback system is included in the basic package), (5) a simple account system visually integrated into the user interface, but only displayed if there is a connection to your databases (e.g., user accounts).
Such integration with your customer accounts is included up to 170 developer hours in the basic package, and any additional costs will depend on the expected effort and will be billed on an hourly basis. Also included in the basic package is the customization of our user interface based on your specific preferences (color choice, font, icons, UI elements like buttons, etc.), as long as the fundamental layout and associated functionalities remain intact. You can provide us with design guidelines or templates to better assist our 2D artists in fulfilling your requirements and offering appropriate branding for your chatbot.
12. Music & Sounds: We can provide up to 5 (loopable) background music tracks tailored to your specifications, created by our sound designers, or obtained through AI solutions (often more practical), or licensed from a provider (may involve costs or be free). Since music is often a crucial aspect, you may prefer to have control over the selection, and we can incorporate your suggestions. Sounds, such as footsteps, jumping, interactions, clicking or operating user interfaces, etc., are already included in the price.
13. Big Data: When your customers interact with the chatbot, data is generated that can help you better understand your customers. Upon request, our basic package includes the collection of rudimentary basic information about the general use of the chatbot (see [link](#)), which does not allow individual-level analysis. We offer an extensive analytics tool and the collection of (user-specific) big data information for €20,000.
14. Integrations with Your Systems: Depending on the platform (e.g., web browser), we handle the integration with your system, such as embedding it into your website. We provide free support for working with your provided server, connecting to your databases, APIs, account systems, etc., as part of the basic package, as long as the effort does not exceed one month's work for a skilled software developer (i.e., 170 hours, which is usually sufficient). Costs exceeding the work of one developer for a month would need to be discussed separately and billed accordingly.

In general: Our intention is never to incur more costs for a customer than the revenue generated. However, as long as that is not the case, we are motivated to go above and beyond the agreed minimum requirements, within reasonable limits, to provide you with an attractive solution that meets all your needs, without additional costs. After all, it is also in our interest to develop successful reference projects, acquire new customers through word-of-mouth, and benefit from long-term collaborations.

"Light" Package for €25,000

For customers who do not require a customized, technically advanced chatbot solution and want to save costs, we also offer a Light version that focuses mainly on a chatbot with voice capabilities. Even in this package, we deliver high-quality realistic conversations with the Digital Human and keep AI third-party costs low thanks to pre-scripted dialogues. The Light package also includes all basic functions such as the user interface, but any customizations (e.g., unique Digital Human, branding of the UI, etc.) would be billed separately based on your specific needs. Please refer to our [pricing](#) for the costs of non-included special services.

Of course, it is possible to start with the Light package and later upgrade to the Base package. However, the upgrade cost may be higher than the price difference between the two packages because making adjustments at a later stage will often be more time-consuming for us compared to developing the Base package from the beginning.

Possible Extensions

In addition to the mentioned features, we can offer many extensions for your Digital Human or chatbot. This includes functions for online shopping, interactive questionnaires, VR training, personal assistants, multiplayer applications (allowing users to meet within the application, such as VR meetings or video calls, etc.), game or metaverse content, and much more. We recommend starting with a simple chatbot (Base package) and then expanding it with additional features and applications as needed, based on user acceptance. The costs of such developments depend heavily on the requirements and will be estimated for you in a fixed-price offer based on €50 to €100 per hour.

For more information on additional services and extensions, please refer to our [pricing](#) page.

Time Investment

The required time for developing your solution depends on the following factors:

1. **Base Package vs. Additional Features:** For implementing the Base package, you can expect approximately 3-6 months (depending on the other influencing factors mentioned below). The time and financial investment for additional features were already vaguely estimated above. We recommend starting with the Base package and gradually expanding it based on your needs and customer feedback. Conversely, parallel development of the Base package and additional features will naturally accelerate the overall time to completion.
2. **Your Own Speed:** Often, we require feedback from you, access to a server, data, and information for preparing the dialogues, etc. So, you can significantly contribute to a faster pace by providing dedicated contacts with the necessary decision-making authority, permissions, and competencies. This information may seem trivial, but effective collaboration will have a significant impact on our overall speed in practice.
3. **In-House Development:** In some cases, you may have better experts for your own technologies (e.g., databases, etc.). While we can handle many tasks, when it comes to very specific technologies, we may need to find, hire, and instruct new freelancers. Therefore, especially for specific tasks (e.g., related to your servers, databases, APIs, etc.), you can greatly contribute to a faster pace by handling them internally and collaborating with us.
4. **Parallelization:** We can parallelize many tasks, but not all of them. Time delays mainly occur when certain areas are blocked, yet they serve as a prerequisite for other areas. With our Base package, this primarily concerns the provision of information or data from you (without this data, no AI training, and without AI training, no chatbot), as well as all challenges related to APIs, servers, and webpages. We are likely to be very fast (usually not exceeding 2 months) when it comes to providing the virtual space, avatars, voices, and other technologies we have already developed. However, wherever we depend on you, we cannot provide a reliable time estimate if we are blocked and waiting for your team. Our own tasks can be effectively parallelized and should each take no more than 2 months.
5. **Quality Assurance:** We will need at least one month for testing and optimization to ensure that you are satisfied with the quality. Based on your feedback, we will make all necessary adjustments to ensure your happiness with the outcome. Good and clear communication can avoid misunderstandings and save time on unnecessary iterations. It is primarily adjustments, corrections, and minor changes that can waste a lot of time. Therefore, it makes sense to proceed in a structured manner and try to summarize feedback and then make adjustments in collected iterations.

If we focus solely on those areas that we are solely responsible for, with no special requests from you and successful communication of feedback (without frequent reworking of initially overlooked adaptation requests from your side), a chatbot based on basic functions should be completed within 3 months. It is generally unrealistic to expect it to be much faster, and adding more employees does not necessarily increase speed (many tasks cannot be easily divided).

Legal Considerations

We consider ourselves an IT service provider developing a software product for you, which adheres to the applicable laws of Austria. Details can be found on our webpage at <https://avataris.io/legal/> in tab "Chatbots Packages", but for now, here is a general (non-binding and maybe outdated) overview:

1. Our services are provided to the best of our knowledge and we strive to ensure the highest quality and satisfaction. However, we do not provide any warranty or liability beyond what is legally required.
2. The scope and price of our developments need to be precisely defined in advance through a contractual agreement. Additional developments will be separately negotiated. It is recommended to create a detailed specification document.
3. You are solely responsible for complying with data protection regulations and the GDPR. We will act based on your instructions but assume no responsibility.

4. Intellectual property rights remain with us. You will have an unlimited usage right for the direct interests of your own company, as long as they align with the original purpose of creating the chatbot solution for you. However, you may not resell, transfer, or provide our developments free of charge to other companies or individuals.
5. We will likely protect parts of our development, to the extent that it is technically and feasibly possible, with measures that prevent easy distribution or imitation (e.g., code obfuscation, dlls, etc.). This only applies to those parts of the code that you (or others) should not need to modify. In general, our software should be maintainable by you independently of us. Specifically, all interfaces, such as those with your own developments, databases, etc., will be provided in open-source code. This allows you to make necessary adjustments to the interfaces independently of us, for example, if you decide to change your database technology.
6. You will be required to sign a contract that prohibits the disclosure of our confidential proprietary developments to third parties and expects reasonable measures to protect these technologies. This point is particularly important if we choose not to employ code obfuscation measures and you receive easily readable source code.

We look forward to your questions and are available for a [video call](#) or any other assistance you may need.