Electronic Journal of Scientific Initiation in Computing, 2025, 23:1
ISSN: 3085-8461 • doi: 10.5753/reic.2025.5311

Research Paper

Inkvision: A Technological Proposal for the Management of Tattoo Studios Based on the Needs of Clients and Tattoo Artists in Feira de Santana, Bahia.

José Augusto Almeida Araújo Júnior [Nobre University Center - UNIFAN | *jaaajunior@gmail.com*]
Rafael Martins Santos [Nobre University Center - UNIFAN | *rafamartin11234@gmail.com*]
Jonas Soto Silva Nogueira [Nobre University Center - UNIFAN |*jonassoto18@gmail.com*]
João Paulo Costa de Santana Melo [Nobre University Center - UNIFAN |*joaopaulocosta070@gmail.com*]

Nobre University Center, Av. Maria Quitéria, 2116 - Centro, Feira de Santana, BA, 44001-008, Brazil.

Abstract. The tattoo market has grown with greater social acceptance, but it still faces challenges in modernizing management, scheduling, and communication processes in studios. This work presents the development of a mobile app prototype to optimize these operations, incorporating features such as automated scheduling, client management, and efficient communication. Research in Feira de Santana with tattoo artists and clients revealed a demand for digital solutions, highlighting the importance of features like automatic reminders and continuous feedback. With a focus on user experience (UX) and agile methodology, the app aims to improve efficiency, reduce errors, and enhance customer satisfaction.

Keywords: Tattoo studios; Automated scheduling; App prototype; Agile methodology

Received: 10 December 2024 • **Accepted:** 23 June 2025 • **Published:** 22 August 2025

1 Introduction

The tattoo market has shown significant growth in recent years, accompanying the greater social acceptance of this form of artistic expression. Recent studies indicate a 35% increase in the sector over the last four years Cacinelli *et al*. [2024], with the health, beauty, and wellness segment, which includes tattoo services, recording a 21.5% growth in 2022 alone Associação Brasileira De Franchising (ABF) [2023]. However, this expansion contrasts with the persistence of limited management methods in many studios, as pointed out by Freitas *et al*. [2023] and Carvalho [2022], who highlight the recurring use of manual systems or low-scalability technologies to manage appointments, clients, and internal communication.

Given this context, there is a need for technological solutions capable of modernizing and optimizing the management of tattoo studios. This study aims to develop a digital solution that addresses the specific demands faced by these establishments during their expansion process, focusing on the context of Feira de Santana, Bahia. To this end, we propose InkVision, a mobile application that integrates essential functionalities for studio management into a single platform, including: (1) an automated scheduling system; (2) a client management module; and (3) optimized communication tools.

The name InkVision was conceived from an etymological foundation that synthesizes the essence of the platform: the term *"Ink"* refers to the tradition and materiality of tattoo art, while *"Vision"* incorporates the prospective and innovative dimension of the solution. This lexical composition reflects the duality between preserving the traditional fundamentals of tattooing and integrating contemporary technologies, symbolizing both technical rigor and the creative ability to transform concepts into body art.

The solution's architecture was designed to automate the session booking process, organize client registration and history, facilitate bidirectional communication between professionals and clients, and generate operational performance indicators. Although similar solutions exist in the market, such as the Tattoo Manager and App Fill applications, InkVision stands out for its development anchored in direct research with tattoo artists and clients in the region, which allowed the identification and resolution of gaps not addressed by existing platforms. Among its main differentiators are: (1) integration with locally relevant payment systems, such as PIX; (2) intelligent notifications adapted to the actual workflows of studios; and (3) an interface carefully aligned with local communication dynamics, ensuring greater user adoption and usability.

The originality of this work is based on three fundamental pillars:

i. Combined methodology: Association between rigorous field research and agile principles (Scrum) to ensure alignment with user demands;
ii. Focus on the local context: Adaptation to the particularities of the Feira de Santana market, often neglected by generic solutions;
iii. Problem-oriented solution: Implementation of functionalities that respond to concrete challenges, such as high cancellation rates and communication failures.

This article is organized into five main sections. Initially, the theoretical framework contextualizes the digitalization of small businesses and the use of mobile applications in business management. Next, the methodology details the data collection procedures and prototype development. The results present the collected evidence and the final product, while the discussion analyzes the study's contributions in the broader scenario of technological solutions for the sector. Finally, the conclusions synthesize the findings, acknowledge limitations, and point out directions for future research.

2 Theoretical Framework

Digitalization has become essential for the modernization and growth of small businesses in a global market. It increases operational efficiency, reduces costs, and improves process accuracy World Economic Forum [2024]. Additionally, it meets the expectations of consumers seeking convenience and personalization. For sectors such as tattoo studios, digitalization is crucial, as it automates processes, avoids human errors, and maintains relationships with clients. Investing in digital solutions positions small businesses at the forefront of innovation and helps them face economic crises Florencio and Ferreira [2023]; Almeida *et al*. [2025]. Automation also allows for expansion and diversification, broadening operations and partnerships Da Silva and Lovato [2016], while businesses that do not digitalize may become obsolete Freitas *et al*. [2023].

Online scheduling systems are essential to improve the interaction between clients and service providers, automating processes and avoiding human errors. In the context of tattoo studios, these systems prevent cancellations and increase efficiency, allowing clients to choose times and services, as well as reducing cancellations and delays Freitas *et al*. [2023]. They also provide analytical reports, aiding in strategic decision-making, such as allocating resources during peak demand periods Carvalho [2022].

2.1 Mobile Applications in Business Management

Tools such as Firebase and MongoDB are widely used for data storage in applications aimed at small businesses, offering good scalability, integration with other platforms, and security mechanisms. Additionally, integrations with *APIs (Application Programming Interfaces)*, payment and calendar systems contribute to facilitating transactions and scheduling, optimizing the user experience. Solutions like Flutter and React Native allow the development of *cross-platform* applications, with lower maintenance costs, which is particularly advantageous for businesses seeking flexibility and gradual expansion Cossa [2022]; Florencio and Ferreira [2023].

Furthermore, the integration of digital payment systems contributes to more efficient management. The option of advance payment, such as a reservation deposit, helps reduce cancellation rates and improves financial control. Offering multiple payment methods, such as PIX, credit card, and bank slips, also adds value to the customer experience Carvalho [2022]; Freitas *et al*. [2023].

2.2 Business Management in the Tattoo Industry

UX (User Experience) and UI (User Interface) design are crucial to attracting and retaining users, especially in personalized businesses such as tattoo studios. Features such as interactive galleries, social media integration, and search filters improve the customer experience. A responsive design with adequate visual feedback can increase app retention Freitas *et al*. [2023]; Norman [2013]. Investing in good UX is a strategic advantage, reinforcing professionalism and customer loyalty.

Time management is essential for tattoo studios, impacting productivity and the customer experience. Automation in scheduling and resource allocation during peak hours improves efficiency and allows for better use of tattoo artists' time Freitas *et al*. [2023]; Carvalho [2022].

Automatic notifications reduce cancellations and delays, increasing efficiency and customer engagement. They also help create loyalty bonds, sending reminders and personalized offers, strengthening communication between the studio and the client Freitas *et al*. [2023]; Oliveira *et al*. [2024].

3 Methodology

This study adopted a mixed methodological approach, combining qualitative and quantitative research to develop a technological solution directed at the specific needs of tattoo studios. The methodology was planned to ensure that all stages of the project, from the initial investigation to the prototype development, were conducted with scientific rigor and alignment with the research objectives.

3.1 Documentary Research

The first stage consisted of comprehensive documentary research, with an analysis of relevant theoretical and technical materials. As a methodological foundation, the work of Marconi and Lakatos [2017] was adopted, while agile development practices were based on Schwaber and Sutherland [2020]. Additionally, specialized articles on user-centered design Lowdermilk [2019], essential for planning intuitive interfaces, were reviewed. Parallel to the academic literature, a detailed analysis of applications available on the main digital distribution platforms (Apple Store and Google Play Store) was conducted, including Tattoo Manager and App Fill, with a systematic examination of their functionalities, advantages, and limitations. This comparative analysis allowed the identification of gaps in the market and opportunities for innovation.

3.2 Field Research

The field research was conducted in Feira de Santana, Bahia, between June 2024 and January 2025, a city chosen for its emerging tattoo market and for representing a scenario of expanding studios. Participants included 3 active tattoo artists (with an average of 5 years of experience) and 26 frequent clients (18-45 years old), selected to represent the predominant user profile. To deeply understand user needs, we applied semi-structured questionnaires containing open and closed questions about experiences with scheduling, communication between tattoo artists and clients, and desired functionalities in a management app. Data collection was conducted through the Google Forms platform, ensuring efficiency and reach, with all responses properly anonymized and participants consenting through the Free and Informed Consent Term (TCLE).

3.3 Agile Development with Scrum

For the development of the technological solution, the agile Scrum methodology was adopted, chosen for its ability to promote incremental deliveries and incorporate continuous user feedback. The simplicity, efficiency, and adaptability of Scrum make it especially suitable for projects in dynamic environments with reduced teams, such as startups and academic projects Thongsukh *et al*. [2017]; Bassi Filho [2008]. Studies reinforce that the use of Scrum favors adaptation to

requirement changes and improves alignment with user expectations Da Silva and Lovato [2016]; Stein Nassr and Gibertoni [2022].

The development process was structured into four biweekly sprints between August and October 2024, with specific goals and incremental deliveries based on a predefined Product Backlog (a prioritized list of items the development team will work on during the project), with a team composed of a Product Owner (responsible researcher), Scrum Master (coordinator), and three developers, whose clear role definition ensured continuous focus on deliveries and efficiency in the workflow, as established by the principles of Schwaber and Sutherland [2020].

Scrum organizes the process into short cycles called sprints, typically lasting two weeks, in which specific goals and incremental deliveries are defined. In the context of this project, the process was structured into four two-week sprints, with *daily meetings* (daily meetings) held to monitor progress and align the team, as demonstrated below:

1. Sprint 1: User registration and creation of basic profiles.
2. Sprint 2: Scheduling module with integrated calendar.
3. Sprint 3: Implementation of the automatic notification system.
4. Sprint 4: Development of payment layouts.

During the process, several stages foreseen in Scrum were carried out, such as:

- *Planning*: definition of sprint goals and tasks;
- *Daily Meetings*: 15-minute daily meetings for team alignment;
- *Review*: presentation of developed functionalities to stakeholders;
- *Retrospective*: analysis of successes and improvements for the next cycle.

In addition to the stages, the main Scrum artifacts were produced: (1) Product Backlog (prioritized list of product requirements and functionalities); (2) Sprint Backlog (specific tasks selected for development in a sprint); and (3) Increment (set of deliverable functionalities at the end of each sprint, in a potentially usable state) Schwaber and Sutherland [2020].

The first sprint focused on user registration and creation of basic user profiles; the second implemented the scheduling and calendar system; the third developed the automatic notifications module; and the fourth sprint worked on the payment system layouts. Full reviews were conducted at the end of each sprint, ensuring that development remained aligned with the needs identified in the research.

Throughout the development process, a continuous validation cycle was maintained with the initial research participants. After each sprint, we invited 2 tattoo artists and 8 clients to test the new functionalities and provide feedback, which was then incorporated into subsequent iterations. This iterative approach ensured that the product genuinely reflected the needs and preferences of the target users, while allowing for quick adjustments based on concrete usability observations. The app model was developed iteratively, with a focus on user experience (UX) and usability, incorporating continuous improvements for progressive refinements of InkVision. The interface was designed to be functional and intuitive.

The app prototype was developed using the Figma platform, which allowed the creation of interactive and functional wireframes (a visual diagram that outlines the structure of a website or app screen). This choice was strategic, as Figma enables collaborative work in real time, responsive prototyping, and usability testing before code development. The term "prototype" in this work refers specifically to this low-fidelity functional version, which includes all main interfaces and navigation flows, serving as a proof of concept validated with real users.

The methodology adopted in this work was carefully designed to ensure not only the technical quality of the proposed solution but also its practical relevance and suitability to the specific context of tattoo studios in Feira de Santana. The combination of theoretical research, field investigation, and agile development resulted in a robust and transparent process that could be replicated for the development of similar solutions in other contexts.

Other agile methods, such as Kanban and Extreme Programming, were considered but discarded for not meeting the specific needs of the project as well, such as the formal structure of iterative cycles and focus on less relevant technical practices.

4 Results and Discussion

The research aimed to identify the preferences and difficulties faced by both groups during the tattoo scheduling and execution process, as well as to find technological solutions that could optimize this process.

4.1 Client Questionnaires

The research revealed that most clients prefer to use social media, such as WhatsApp and Instagram, to schedule their tattoo sessions. This method was considered the most accessible and straightforward, as many tattoo artists use these platforms to communicate with clients. However, the analysis indicated that this model has several limitations, especially regarding delayed responses and the lack of organization in scheduling.

Many clients mentioned that, despite the convenience of being on popular platforms, the scheduling process via social media ends up becoming disorganized, and the lack of immediate confirmation generates dissatisfaction. Among the main difficulties pointed out, clients highlighted the lack of immediate confirmation, which creates uncertainty about the appointment, and the need for tools that would allow more efficient control of their commitments.

Among the most desired functionalities were automatic reminders, to avoid forgetfulness, the possibility of choosing available times more conveniently, the selection of the preferred tattoo artist based on portfolio and availability, tracking the history of tattoos, and real-time notifications alerting about confirmations, changes, or cancellations of appointments.

Another relevant point identified was dissatisfaction with unstructured communication. Clients prefer a digital scheduling system where the process is more organized, faster, and without the need for constant message exchanges.

4.2 Tattoo Artist Questionnaires

The research also included tattoo artists, whose reports showed that, although most still use social media to schedule sessions, the current model is not efficient for managing the growing client demand.

Communication through direct messages and comments on posts about availability has become disorganized, leading to failures in appointment management. Tattoo artists reported that the current process often results in duplicate bookings or loss of important information, such as specific client preferences or details about the tattoo style.

The use of manual tools, such as notes in physical agendas or spreadsheets, is also common among tattoo artists, which increases the chance of errors and decreases productivity. The research showed that some tattoo artists already recognize the advantages of adopting an automated digital system, as they believe it can minimize errors, increase efficiency, and improve the client experience.

Among the benefits desired by tattoo artists were automatic notifications to confirm appointments or inform about changes, advance payment systems to ensure client commitment before the session, and interactive digital calendars, which would allow viewing available times and better organizing appointments.

4.3 General Analysis of Questionnaires

The results of the analysis indicated that, for both clients and tattoo artists, the current scheduling system is inefficient and disorganized. The reliance on social media, although practical at first, does not provide the necessary control over the schedule, confirmation of availability, or adequate tools for efficient process management.

The lack of automation is one of the main flaws pointed out, directly impacting the client experience and the tattoo artist's performance. The proposed solution to address these issues is the implementation of a digital scheduling application, which would integrate functionalities such as an interactive calendar, where the client could view available times and schedule simply.

Additionally, the system would have automatic notifications to confirm appointments, remind clients about sessions, and alert about possible changes. The tool would also include a direct communication channel between clients and tattoo artists, such as an internal chat, and an online payment system, ensuring the client's commitment to the scheduled date.

This digital system would not only resolve issues of organization and speed but also provide a significant improvement in the user experience for both clients and tattoo artists. Based on the research results, it became clear that current scheduling methods do not satisfactorily meet the needs of both groups. The use of social media and manual tools results in a disorganized process, causing difficulties in time management, duplicate bookings, and ineffective communication. The implementation of a modern scheduling application, with functionalities such as automatic notifications, online payment options, and an interactive calendar, would be an ideal solution to optimize the process, improve efficiency, and overall satisfaction of those involved in the tattoo market.

4.4 Prototyping

The prototype of the client area of the app is designed for an intuitive and fluid experience. The home screen offers two main options: "Login" to access an existing account and "Register" to create a new account, with essential fields for security and personalization. The client interface allows easy session scheduling, exploring tattoo artist portfolios, and accessing appointment history.

The main page organizes functionalities clearly and intuitively, displaying tattoo artists' portfolios, scheduled appointments, and a button for booking new sessions. The client can explore professionals' profiles, schedule sessions by entering the date, tattoo artist, desired style, and visual references. The "Your Sessions" section provides details of each appointment, with quick access to a chat for clarifying doubts. It is noted that, for visual presentation purposes, the images and names displayed in the app prototype were generated by artificial intelligence to ensure the anonymization of personal data and comply with the ethical principles established in the Free and Informed Consent Term (TCLE) signed by research participants.

The "Explore Professionals" button offers two options: chat with tattoo artists or a list with detailed information about them. The "Check Dates" functionality allows viewing available dates on the calendar, filtered by tattoo artist, as shown in **Figure 1**.

When scheduling a session, the client fills out a form with information and reference images, which are sent to the tattoo artist. Direct communication in the chat allows quick adjustments to the appointment. The design is focused on facilitating navigation and improving the user experience.

The prototype of the tattoo artist area was designed to be practical and intuitive, allowing the professional to easily manage their schedule and interact with clients. On the main page, the tattoo artist has access to their portfolio, where they can edit and add new images of their tattoos. They can also view and manage their appointments, with the possibility of adjusting dates, times, and adding extra sessions if necessary. The interface offers a direct chat with clients to align session details.

The tattoo artist can also edit their profile, updating information such as photo, name, specializations, working hours, and portfolio, as can be seen in **Figure 2**.

The "explore professionals" functionality offers three options: a chat for communication with clients, a session history to access past information, and a view of other tattoo artists' profiles, allowing for experience sharing and inspiration. The calendar, accessed through the "Check Dates" button, allows the tattoo artist to manage their availability and view other professionals' schedules, optimizing studio scheduling. The calendar allows them to mark days as available or unavailable, ensuring their schedule is controlled according to their needs. When accessing an appointment, the tattoo artist can confirm, cancel, or modify the session.

The scheduling process is similar to that of the client, with the tattoo artist able to edit and adjust details such as the date, tattoo style, and reference images. After submitting the appointment, they can review session details, make modifications, or even add a new time if the session requires more time. The system allows the tattoo artist to organize their schedule

Figure 1. Scheduling screens of the Inkvision app

Figure 2. Profile tab and explore professionals

flexibly, ensuring an efficient and personalized management experience.

4.5 Conceptualization and Inspirations for the Prototype

The design of the Inkvision app underwent a carefully grounded evolutionary process in theoretical principles and market analyses. The approach followed the precepts of user-centered design proposed by Norman [2013], which emphasizes the importance of the correspondence between user actions and expected results, the visibility of interface elements, and immediate feedback. These concepts were applied from the initial conception to the refined versions of the prototype.

For the navigation structure, we adopted the best practices documented by Lowdermilk [2019] for mobile interfaces, implementing established interaction patterns such as bottom tab navigation, which offers quick access to main functionalities, and the list-detail pattern, in which the user views a summarized list of appointments and, upon selecting an item, is directed to a screen with detailed information about that appointment. The organization of forms followed the principle of information progression, reducing the complexity perceived by the user during filling.

Visual aspects were developed based on the studies of Neil [2012] on usability in mobile devices, ensuring adequate contrast, clear visual hierarchy, and consistent use of universally recognized icons.

This combination of academic theory and practical actions allowed the development of an interface that balances innovation and familiarity, reducing the learning curve while meeting the specific needs identified in our field research. The evolution of the design reflects, therefore, a synthesis between:

1. Established principles of usability and interaction design;
2. Critical analysis of existing solutions;
3. Concrete data from user research;
4. Iterative testing with prototypes of different fidelities.

This multidimensional approach through the mapping **Table 1** ensured that design decisions were always grounded in evidence, both theoretical and empirical, resulting in a solution that genuinely meets the needs of tattoo studios.

Table 1. Mapping of problems and implemented solutions

Identified Problem	Frequency (%)	Reported Impact	Solution in Inkvision
Duplicate bookings	78% (tattoo artists)	High	Integrated calendar with real-time updates
Communication failures	22% (clients)	Medium	Internal chat with conversation history
Forgotten sessions	34% (both)	High	Automatic notifications (24h and 1h before)
Difficulty showing references	57% (tattoo artists)	Medium	Image gallery per appointment
Unconfirmed payments	13% (tattoo artists)	High	Advance deposit system via PIX

Quantitative data were complemented with qualitative insights obtained through open-ended questions. For example, 82% of tattoo artists reported losing, on average, 2 hours weekly reorganizing schedules manually, while 38% of clients mentioned difficulties in aligning expectations about designs.

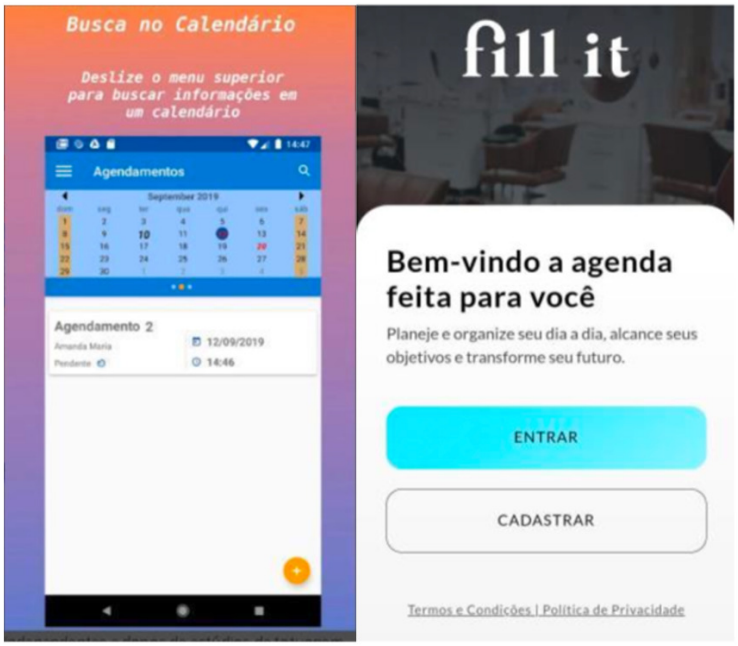

Figure 3. Profile tab and explore professionals

Research with clients and tattoo artists pointed to the need for a more interactive calendar, automatic notifications, direct chat, and a clear form for entering tattoo details. Tattoo artists highlighted the disorganization of current schedules, and clients emphasized the importance of reminders and online payments.

These insights helped shape the final solution, which includes an intuitive calendar, automatic notifications, direct chat, and a more efficient schedule management system. The prototype proposes a modern and functional platform that aims to optimize appointment management and improve communication between clients and tattoo artists, with the potential to transform studio routines.

Complementing these theoretical foundations, we conducted a detailed analysis of market applications, such as *Tattoo Manager* and *App Fill* **(Figure 3)**, identifying successful interaction patterns that were adapted to our specific context.

The *Tattoo Manager* emerged as a study object for its intuitive interface and consolidated functionalities, such as social media integration and work galleries. However, our analysis identified significant limitations, particularly the lack of support for PIX payments, the preferred method in the Brazilian context, and a notification system considered inefficient by interviewed users. These deficiencies were frequently mentioned by tattoo artists participating in the field research.

The *App Fill*, in turn, was selected for its focus on quick scheduling and online deposit system. However, the platform presents important gaps in the user experience, especially the lack of an integrated chat, which forces clients and tattoo artists to switch between multiple apps for communication, and the inability to link visual references directly to appointments, a recurring need identified in our questionnaires.

5 Final Considerations

This work resulted in the creation of a scheduling application prototype for tattoo studios, developed based on the needs identified among clients and tattoo artists. The research revealed challenges related to appointment organization, communication, and reducing no-shows, which were addressed with functionalities such as an interactive calendar, integrated chat, automatic notifications, and detailed client requests. The app design, inspired by models such as *Tattoo Manager* and *App Fill*, sought to balance aesthetics and functionality, offering an intuitive interface.

The project contributes to optimizing the management of tattoo studios, facilitating appointment tracking for clients and schedule organization for tattoo artists. As improvement proposals, we suggest validating the prototype with real users, integrating online payments, advanced customization features, data analysis tools, and expanding accessibility. Additionally, the app can be adapted for other segments that also rely on appointment-based services.

However, it is important to recognize the study's limitations. The small sample of questionnaire respondents and the restricted geographical focus on the city of Feira de Santana limit the generalization of the results to other regions or contexts. These aspects reinforce the need for future studies with broader coverage, encompassing different user profiles and regional realities, to validate and refine the proposed solution.

Declarations

Acknowledgements

We sincerely thank all participants who contributed to this research, providing time, knowledge, and valuable experiences. Their collaboration was essential for the development of this work. We also acknowledge the institutional support and encouragement from colleagues who, directly or indirectly, contributed to the realization of this study.

Authors' Contributions

José Augusto Almeida Araújo Junior was responsible for the conceptualization of the study, project administration, overall supervision, and writing of the original draft. Rafael Martins Santos contributed to data curation, software development, visualization of results, and drafting of the initial manuscript. Jonas Soto Silva Nogueira worked on data curation, formal analysis, software development, and manuscript writing. João Paulo Costa de Santana Melo participated in methodological conception, data validation, and critical review of the text. All authors contributed to the investigation, review, and editing of the manuscript, read, and approved the final version. This statement follows the CRediT Taxonomy (https://credit.niso.org/).

Competing interests

The authors declare that they have no conflicts of interest.

Availability of data and materials

The datasets and/or software generated and/or analyzed during the current study will be made available upon request.

Further relevant information

This study followed all current ethical standards for research with human subjects, in accordance with Resolution No. 510/2016 of the National Health Council. All participants were informed about the research objectives and agreed to participate voluntarily, by signing the Free and Informed Consent Term (TCLE).

References

Almeida, A. P. d., Souza, J. B. S. d., and Camurça, L. C. (2025). O impacto da digitalização no controle de estoque de pequenas empresas: uma análise teórica do sistema shop. *Revista Ibero-Americana de Humanidades, Ciências e Educação*, 11(5):1651–1666. DOI: 10.51891/rease.v11i5.19033.

Associação Brasileira De Franchising (ABF) (2023). Inovações e tendências aumentam faturamento no setor de saúde, beleza e bem-estar. Portal do Franchising. Available at: `https://www.portaldofranchising.com.br/notici-as/inovacoes-e-tendencias-aumentam-faturamento/` Accessed: 25 nov. 2024.

Bassi Filho, D. L. (2008). *Experiências com desenvolvimento ágil*. Mestrado em Ciência da Computação, Universidade de São Paulo, São Paulo. DOI: 10.11606/D.45.2008.tde-06072008-203515.

Cacinelli, B. A., Souza, L. O., Macedo, K. G., Bueno, M. P., and Coleti, J. d. C. (2024). Análise sobre o crescimento do mercado da tatuagem no Brasil. *REVISTA FOCO*, 17(9):e6171. DOI: 10.54751/revistafoco.v17n9-087.

Carvalho, D. d. S. (2022). *Desenvolvimento de um chatbot para marcação de consultas em clínicas*. Trabalho de Conclusão de Curso (Graduação em Engenharia de Computação), Universidade Federal do Rio Grande do Norte. Available at: `https://repositorio.ufrn.br/handle/123456789/50694`.

Cossa, D. T. (2022). *Desenvolvimento de um chatbot aplicado à marcação de consultas clínicas: Caso de estudo: Sistema Nacional de Saúde (SNS)*. Trabalho de Conclusão de Curso (Licenciatura em Engenharia Informática), Universidade Eduardo Mondlane. Available at: `http://monografias.uem.mz/handle/123456789/2999`.

Da Silva, E. C. and Lovato, L. A. (2016). Framework scrum: eficiência em projetos de software. *Gestão e Projetos: GeP*, 7(2):1–15. Available at: `https://dialnet.unirioja.es/servlet/articulo?codigo=5632152`.

Florencio, E. d. O. and Ferreira, L. R. (2023). Protótipo de aplicativo Android para fisioterapeutas autônomos. Universidade de Uberaba. Available at: `http://dspace.uniube.br:8080/jspui/handle/123456789/2672`.

Freitas, M. V. L., Toledo Junior, P. R., and Oliveira, R. L. S. (2023). Sistemas de agendamento para barbearias: o papel dos sistemas de agendamento na melhoria da experiência do cliente em barbearias. VII Simpósio de Tecnologia da Fatec Jales. Available at: `https://ric.cps.sp.gov.br/handle/123456789/16700`.

Lowdermilk, T. (2019). *Design Centrado no Usuário: um guia para o desenvolvimento de aplicativos amigáveis*. Novatec Editora.

Marconi, M. A. and Lakatos, E. M. (2017). *Fundamentos de metodologia científica*. Atlas, São Paulo, 8 edition.

Neil, T. (2012). *Padrões de design para aplicativos móveis*. Novatec Editora.

Norman, D. A. (2013). *The design of everyday things*. Basic Books.

Oliveira, E. F. *et al*. (2024). Criando um aplicativo para agenda de eventos. *Seminário de Ensino e Extensão Área Engenharias e Exatas*, 1(1):22–22. Available at: `https://revista.programagaia.com.br/index.php/ensinoextensao1/article/view/2021`.

Schwaber, K. and Sutherland, J. (2020). The scrum guide. Available at: `https://scrumguides.org/`. Accessed at: 25 nov. 2024.

Stein Nassr, I. and Gibertoni, D. (2022). Scrum na perspectiva do desenvolvedor de software. *Revista Interface Tecnológica*, 19(2):163–175. DOI: 10.31510/infa.v19i2.1494.

Thongsukh, S. *et al*. (2017). Framework de startup baseado no framework scrum. In *Conferência Internacional sobre Artes Digitais, Mídia e Tecnologia (ICDAMT), 2017*, pages 458–463. IEEE. DOI: 10.1109/ICDAMT.2017.7905012.

World Economic Forum (2024). Digital transformation for smes: A strategic framework. Available at: `https://www3.weforum.org/docs/WEF_Digital_Transformation_for_SMEs_2024.pdf`. Accessed at: 25 nov. 2024.