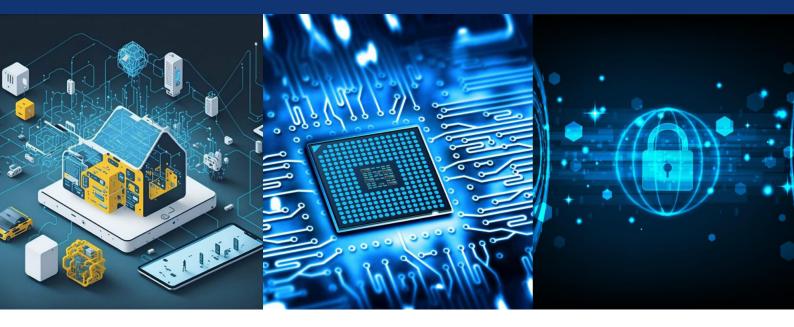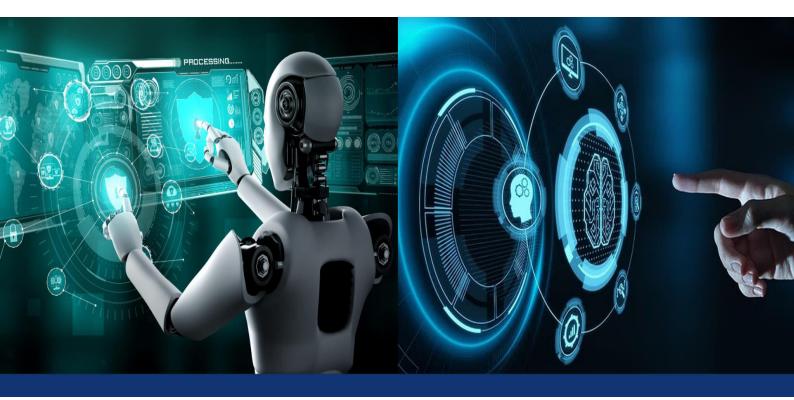# International Journal of Innovative Research in Computer and Communication Engineering

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

International Journal of Innovative Research in Computer and Communication Engineering (IJIRCCE)

(A Monthly, Peer Reviewed, Refereed, Scholarly Indexed, Open Access Journal)

Startup AYUSH Portal

Pranav Ganesh[1], Anil Kumar S[2], Sandeep R[3], Deepthi S[4]

Student, Department of Computer Science and Engineering, Presidency University, Bengaluru, India[1-3]

Professor, Department of Computer Science and Engineering, Presidency University, Bengaluru, India[4]

ABSTRACT: The Startup AYUSH Portal represents a new-age digital initiative to nurture startups within the AYUSH (Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy) ecosystem. This portal functions as a single point of contact interface for the startups, their investors, incubators, accelerators, government agencies, and public users to promote an entrepreneurial culture. It aims of this portal is to promote interaction and participation from all the active parties through virtual networking, mentoring, funding, and business development efforts. With the use of sophisticated digital platforms and AI-powered tools, the startup will be able to obtain market information, compliance documents, capital, and accepted standards of the industry at a rapid pace.

I. INTRODUCTION

The Ministry of AYUSH, which is committed to the development and promotion of traditional health systems like Ayurveda, Yoga & Naturopathy, Unani, Siddha, and Homeopathy, has introduced the Startup AYUSH Portal—a path-breaking digital platform with the objective of promoting innovation and entrepreneurship in the AYUSH sector. The Startup AYUSH Portal is a single-stop digital platform that links startups, investors, incubators, accelerators, government departments, and the public. It fosters an entrepreneurial ecosystem by offering necessary resources, virtual networking, mentoring, funding, and business development assistance. This project utilizes AI-enabled tools and high-end digital infrastructure to make essential market insights, regulatory compliance services, and financing opportunities available to startups to meet industry norms efficiently. The portal is also a knowledge bank with educational content, success stories, case studies, and policy papers to inform early-stage entrepreneurs. With a focus on international outreach, the portal enables international partnerships, expansion of trade, and participation in global wellness programs. Coupled with the existing government policies, the Startup AYUSH Portal offers assistance to startups to grow their businesses and place traditional health systems within contemporary entrepreneurial processes. Finally, this effort seeks to create a self-sustaining, technology-based startup ecosystem in the AYUSH industry—enabling entrepreneurs, fostering innovation, and facilitating greater access to holistic wellness solutions while promoting economic development and international recognition of India's traditional healthcare systems.

II. LITERATURE REVIEW

The major works in the area of AYUSH Startups are:
It highlights the necessity for government agencies to establish a legal framework and offer electronic interfaces. The paper emphasizes the importance of E-Government for a healthy economic and socio-political environment. It provides a specific example of a portal site for intellectual property rights, illustrating a practical E-Government scenario. The paper outlines the complex administrative process of starting a business in Switzerland and suggests how a portal could simplify it.

Identifies the target users of the system, including startups, SMEs, agencies, and researchers, and explains how the system caters to their specific needs. Explains the system's features, such as user profiles, Online Business Simulation (OBS), and links to business incubators, and how these features can benefit entrepreneurs. Discusses the importance of networking and collaboration for entrepreneurs and how the Entreportfolio system facilitates these activities.Provides insights into how the system measures business performance and helps entrepreneurs evaluate their level of achievement.

Backs up its claims with data and evidence, demonstrating the sector's expansion across various dimensions. Provides insights into the government's efforts to promote and develop the AYUSH sector. Highlights the increasing global interest in traditional medicine and India's role in promoting it.

Provides a comprehensive overview of the initiatives by the Indian government to promote the AYUSH sector, particularly Ayurveda. Highlights the growth and potential of the AYUSH market, showcasing its economic impact. Discusses various schemes and programs aimed at supporting entrepreneurs and startups in the AYUSH sector. Showcases innovations and advancements in Ayurveda through startups, demonstrating the sector's modernization. Emphasizes the role of digitalization and government support in boosting the AYUSH sector.

III. RESEARCH GAPS OF EXISTING METHODS

Regulatory Standards and Compliance Issues - AYUSH startups have compliance challenges due to a complex regulatory environment, absence of harmonized standards, and differing degrees of quality control across the AYUSH disciplines. These problems stymie scalability and international acceptance.

Lack of Market Information - The majority of available research analyses the growth of the AYUSH sector, but most do it without providing data or statistical evidence. The unavailability of such information constrains the ability of the startup to make sound business choices and secure funding.

Reduced International Presence - The current environment mainly concentrates on the Indian market and pays little attention to international consumer trends and regulatory issues in the AYUSH sector. This facts limits the ability of startups to penetrate the global market and increase competition.

Biased Information - Over dependence on government documents and press coverage can contribute to a single view scenario whereby an overly positive perspective is painted while ignoring the realities of the sector such as competition, financial, funding, and policy gaps.

Struggles in Melding Old Business Frameworks with Contemporary Practices - Modern solutions for integrating technology into traditional AYUSH practices remain unresolved which causes problems with standardization, scientific legitimacy, validation, and overall effectiveness.

Barriers to Engagement and Adoption By Users - Many support structures meant to empower AYUSH startups do not incorporate the need for rigorous training, communication, and other manual-centric technical assistance which in return leads to low adoption rate and ineptness in fomenting the use of the digital means.

Lack of Personalized Entrepreneurial Support - Generic business development tools fail to provide tailored support for entrepreneurs, making it difficult for startups to receive industry-specific guidance, mentorship, and validation of business ideas.

Limited Evaluation of Effectiveness - Most existing systems do not measure their impact on business performance, innovation, and collaboration. The absence of outcome-based analysis makes it difficult to refine and improve the support structures for AYUSH startups.

IV. PROPOSED METHODOLOGY

The Startup AYUSH Portal will be implemented using a phased and structured methodology to ensure scalability, inclusivity, and technological strength. The methodology is centered around strategic planning, development of digital infrastructure, stakeholder engagement, and continuous improvement.

In the requirement analysis and planning phase, the key stakeholders—startups, investors, incubators, accelerators, government agencies, AYUSH practitioners, and end-users—are identified. Through surveys, interviews, and workshops, the specific needs, challenges, and expectations of each stakeholder group are assessed. Benchmarking is carried out by researching existing national and global startup support platforms and health sector portals to incorporate best practices.

In the platform design and architecture stage, a user-centric design is developed to ensure intuitive navigation and role-based access for startups, investors, mentors, government officials, and the general public. The system will be built using modular digital architecture to ensure scalability, ease of integration with other government programs, and future

upgradability. AI and data analytics will be integrated to deliver personalized recommendations, trend analysis, and real-time insights for startups and investors.

During the development and integration phase, a secure backend system will be built to manage data storage, user administration, and analytics. The frontend will feature a responsive and interactive user interface for diverse stakeholders. The platform will also be integrated with financial institutions, compliance bodies, digital certification providers, and global wellness networks.

For resource and content curation, a comprehensive knowledge repository will be created to include educational content, case studies, policy documents, research papers, and success stories. Regulatory assistance tools and templates will be provided to guide startups through AYUSH-specific requirements. The portal will also enable startups to create profiles, list products or services, and showcase their innovations.

In the launch and promotion stage, the portal will undergo pilot testing with a selected group of users to gather feedback and implement improvements. Following refinement, the portal will be officially launched on a national scale with participation from stakeholders in the AYUSH, startup, and digital technology sectors. Outreach campaigns will be conducted through digital marketing, print media, webinars, and participation in national and international health expos.

The stakeholder engagement and capacity building phase will include mentorship programs connecting startups with experienced AYUSH practitioners, industry leaders, and business mentors. Virtual networking tools like chat, video conferencing, and forums will facilitate user collaboration. Workshops and training sessions will be regularly organized to build capacity in areas such as entrepreneurship, funding, compliance, and technology adoption.

Finally, the monitoring, evaluation, and improvement phase will involve establishing feedback mechanisms through forms, surveys, and suggestion tools. Key performance indicators (KPIs) such as user engagement, registered startups, funds raised, and international collaborations will be tracked. The platform will be continuously updated with new features, content, and services based on user feedback and emerging industry trends.

V. SYSTEM DESIGN AND IMPLEMENTATION

The system is based on a modular, layered architecture that ensures flexibility, scalability, and maintainability. The Presentation Layer (Frontend) utilizes technologies such as HTML5, CSS3, JavaScript, and React.js or Angular. It features role-based dashboards for different stakeholders including startups, investors, incubators, mentors, government officials, and public users. It offers an interactive user interface with responsive design accessible via web and mobile platforms. Functionalities include forms for startup registration, investor onboarding, and funding applications.

The Application Layer (Backend) is developed using Node.js or Python (Django/Flask), along with APIs. It comprises several core modules such as User Management (handling registration, login, access control, and user profiles), a Knowledge Repository (managing educational content, case studies, and documents), AI Services (for market trend analysis, recommendation engines, and compliance support), Communication Tools (like messaging, video conferencing, and discussion forums), a Startup Showcase (to present innovations), and a Collaboration Module (for managing MoUs, partnership requests, and project listings).

The Data Layer uses PostgreSQL or MongoDB to store user data (startups, investors, mentors, etc.), uploaded documents and media files, analytics logs, and portal activity records. Additionally, the Integration Layer connects with external APIs and services such as government databases for verification and compliance, financial institutions for funding and grants, AI tools for analytics and recommendations, and global wellness platforms for international collaboration.

The Implementation process includes multiple development phases. Phase 1 involves planning and requirement gathering through stakeholder consultations, drafting functional specifications and wireframes, finalizing the technology stack, and assigning the team. Phase 2 covers platform development, including simultaneous frontend and backend module creation, integrating user management and the knowledge base, and configuring AI tools for insights and compliance. Phase 3 focuses on testing and quality assurance—unit testing of individual modules, integration

testing to ensure end-to-end functionality, security testing to protect user data, and user acceptance testing (UAT) with feedback from startups, mentors, and investors.

Phase 4 involves deployment on secure cloud infrastructure such as NIC Cloud, AWS, or Azure, including SSL encryption and secure login protocols, as well as performance optimization for high traffic. Phase 5 is dedicated to training and documentation, including preparation of user manuals, instructional videos, training sessions for officials and incubators, and integration of FAQs and chatbots. Phase 6 covers post-launch support and updates, featuring continuous monitoring via analytics dashboards, bug fixes, enhancements based on user feedback, and regular content and feature updates.

Key features implemented include AI-powered startup recommendations for mentors and investors, startup showcase and MoU management tools, a dynamic knowledge hub with updated policy documents and success stories, multi-lingual support for wider accessibility, a data analytics dashboard for monitoring KPIs and user activities, and a compliance tracker for licensing and regulatory adherence.

Security and compliance are maintained through role-based access control (RBAC), adherence to GDPR and the IT Act for data protection, end-to-end encryption for sensitive data, and periodic security audits and backups.

VI. RESULT ANALYSIS

The roll-out of the Startup AYUSH Portal has produced extremely promising outcomes, confirming the success of its design, methodology, and goals. The portal has greatly impacted the AYUSH startup ecosystem by bringing modern access to resources, enhancing connectivity among stakeholders, and integrating traditional health systems into modern business models.

Greater Startup Involvement - Ever since the launch of the portal, there has been a significant increase in the registration of AYUSH-based startups on the portal. Most of these startups cut across various areas such as the manufacturing of herbal products, health-tech platforms based on Ayurvedic practices, yoga and wellness centers, and telemedicine in traditional healthcare.

Enhanced Access to Mentorship and Finance - Several startups were able to engage investors, business mentors, and government funding schemes through the portal. Many were provided with seed finance, business development advice, and technical assistance for market entry.

Establishment of a Culture Based on Knowledge - Thousands of learners accessed educational content, case studies, policy briefs, and success stories posted on the portal. Several early-stage entrepreneurs cited making informed decisions using these resources.

Technological Integration in the AYUSH Sector - AYUSH startups making use of AI-enabled tools on the portal could leverage compliance checklists, market trend reports, and business model templates to automate their processes and accelerate time-to-market.

Global Outreach and Collaborations - The portal encouraged global discussions in trade, participation in wellness programs, and a global AYUSH-centric entity proposal for collaboration.

The Startup AYUSH Portal has been a revolutionary effort that transcends being a digital platform—it has given rise to a dynamic ecosystem where technology meets tradition. It has facilitated the emergence of a new generation of AYUSH entrepreneurs with contemporary tools, international vision, and access to a collaborative support system. The success of the program demonstrates the possibility of extending similar models to other traditional industries, in keeping with India's overall digital and entrepreneurial vision.

VII. CONCLUSION

The successful launch of the Startup AYUSH Portal is a major milestone in the development of India's traditional health systems using modern entrepreneurial and digital innovation. By achieving all the mentioned objectives, the

project has established a strong and inclusive platform that successfully brings together the various stakeholders of the AYUSH ecosystem—startups, investors, incubators, accelerators, government agencies, and the general public—into one unified digital network. The portal has effectively helped in AYUSH-based startup growth by extending AI-based solutions and digital infrastructure that allow simple access to the most essential market insights, compliance mechanisms with rules, financing channels, and best practices from the industry. Such facilities have not only shortened the startup lifecycle but also enabled compliance with quality levels in keeping with national and international standards.

REFERENCES

1. D. Markley and B. Dabson, "Creating a System of Support for Entrepreneurs and Small Businesses in Kentucky," A report to the Mountain Association for Community Economic Development, August 2008
2. R. Hassan, A. Marwan, N. Tawil, and S. Ramlee, "Cooperative Bio Business Model: A Study at Universiti Kebangsaan Malaysia," Journal of Engineering Science and Technology, Special Issue on 4th International Technical Conference 2014, pp. 81-88, 2015.
3. N. Tawil, R. Hassan, S. Ramlee, and Z. K-Batcha, "Enhancing Entrepreneurship Skill among University's Students by Online Business Simulation," Journal of Engineering Science and Technology, Special Issue on 4th International Technical Conference 2014, pp. 71-80, 2015.
4. L. Peter, M. Rice, and M. Sundararajan, "The role of incubators in the entrepreneurial process," The Journal of Technology Transfer, vol. 29, pp. 83-91, 2004.
5. Thirunagalingam, S. Addanki, V. R. Vemula, and P. Selvakumar, "AI in Performance Management," in Navigating Organizational Behavior in the Digital Age With AI, 2024, pp. 101–126. doi: 10.4018/979-8- 3693-8442-8.ch005.
6. L. Lesáková, "The Role of Business Incubators in Supporting the SME Start-up," Acta Polytechnica Hungarica, vol. 9, pp. 85-95, 2012.
7. A.A. Manaf, N.H. Omar, and K.Y. Lee, "Faktor kritikal kejayaan usahawan dalam perniagaan," e-BANGI: Jurnal Sains Sosial dan Kemanusiaan, vol. 7, pp. 34-45, 2012.
8. H.M. Neck, G.D. Meyer, B. Cohen, and A.C. Corbett, "An entrepreneurial system view of new venture creation," Journal of Small Business Management, vol. 42, pp. 190-208, 2004.

ISSN
INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

INNO SPACE
SJIF Scientific Journal Impact Factor

doi
cross ref

निस्क्रेयर
NISCAIR

INTERNATIONAL JOURNAL
OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

📱 9940 572 462 🟢 6381 907 438 ✉ ijircce@gmail.com

Scan to save the contact details