DeepMed

Business Analysis Report

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Beirut, Lebanon

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Executive Summary

DeepMed is a Beirut-based early-stage startup dedicated to transforming the healthcare landscape through its no-code, drag-and-drop AI platform tailored specifically for medical professionals. By automating every crucial step—from data cleaning and feature selection through multi-algorithm training and benchmarking to deployment—DeepMed empowers clinicians, lab technicians, and small clinics to swiftly extract actionable insights from both tabular and image data in a matter of minutes rather than months.

Launching in Lebanon's underserved AI market, DeepMed intends to validate its product-market fit through pilot programs carried out in independent clinics and research facilities. Following this initial phase, the company plans to broaden its reach across the wider MENA region. The platform incorporates a flexible, usage-based pricing model that combines bundled credits with straightforward monthly subscriptions, ensuring that low-volume users have access while simultaneously generating significant value from larger institutions. With a well-defined roadmap that includes advanced explainability, new data modalities, and strategic partnerships, DeepMed's mission is to establish itself as the indispensable AI companion for healthcare professionals in emerging markets.

1 Company Overview

- **Name:** DeepMed
- **Headquarters:** Beirut, Lebanon
- **Founded:** April 2025
- **Founders:** Mahmoud Chaer, Hussein Moukalled, and Omar Chehab
- **Mission:** Democratize AI for medical practitioners through an intuitive, truly no-code, end-to-end platform.
- **Current Stage:** Minimum Viable Product (MVP) live on Azure; first pilot users successfully onboarded.

2 Problem & Opportunity

2.1 Pain Points

DeepMed's approach addresses several critical pain points currently faced by healthcare professionals:

1. **Technical Barrier:** A significant number of clinicians and healthcare personnel lack sufficient coding or data-science skills, rendering conventional AI tools inaccessible.
2. **Time to Insight:** Traditional AI projects may take several months, significantly hindering timely decision-making and responsiveness to patient needs.

3. **Cost Prohibitive:** Most enterprise-level AI platforms impose substantial annual fees, which are often beyond the budget of small clinics and individual practitioners.

4. **Fragmented Toolchain:** The reliance on multiple disconnected solutions for various stages of AI deployment leads to inefficiencies and workflow friction, ultimately impacting patient care.

2.2 Market Size & Growth

The potential for growth in the healthcare AI sector is significant:

- **Global Healthcare AI Market (2025):** The market is projected to reach $22 billion, with a remarkable compound annual growth rate (CAGR) of 35%.
- **Regional Healthcare IT Spend (2025):** Anticipated to be approximately $10 billion, driven by an increasing interest in AI applications to enhance diagnostics and operational efficiency.
- **Addressable Market (Clinics & Labs):** With thousands of small-to-mid-sized clinics and research centers in the region, the potential user base is extensive and ripe for disruption.

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3 Value Proposition

DeepMed's value proposition is designed to address the unique challenges faced by healthcare professionals:

- **Zero-Code, Drag-and-Drop Functionality:** Users can progress from raw data to a deployed model in just five clicks, eliminating the need for programming knowledge.
- **Rapid Turnaround for Insights:** Actionable predictions are generated within minutes, significantly improving the speed at which healthcare providers can act on data.
- **Automated Best-Fit Selection:** The platform simultaneously trains and compares multiple algorithms, ensuring optimal performance tailored to specific use cases.
- **Local Processing Capability:** All computations occur under the user's control, enhancing data privacy and compliance with regulatory requirements.
- **Transparent Pricing Model:** Users only pay for what they use, with clear and straightforward pricing that eliminates hidden costs.

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4 Product & Technology

4.1 Core Modules

DeepMed offers a comprehensive suite of core modules designed for ease of use and efficiency:

1. **Data Ingestion**
    - Intuitive drag-and-drop functionality allows for seamless uploads of CSV, Excel, and image files.

- Automated schema detection and validation ensure that data is properly formatted for analysis.

2. **Data Processing Pipeline**
   - Advanced algorithms for handling missing values, detecting outliers, and normalizing datasets.
   - Automated feature encoding and selection processes streamline data preparation.
3. **Model Training & Benchmarking**
   - Support for a range of tabular models including tree-based algorithms and linear regression.
   - Image processing capabilities through lightweight Convolutional Neural Networks (CNNs) and transfer learning.
   - Built-in cross-validation and performance benchmarking ensure the robustness of selected models.
4. **Deployment & Prediction**
   - Offer instant access to API endpoints and a user-friendly web UI for both individual and batch predictions.
   - Ability to export model artifacts into user-preferred formats, including Docker containers and ONNX for integration into existing workflows.

4.2 Architecture

The DeepMed platform is built on a highly scalable and secure architecture:

- **Front End:** Implemented with modern responsive HTML, CSS, and JavaScript frameworks (e.g., React), ensuring excellent user experiences across devices.
- **Back End:** A robust configuration utilizing Flask microservices managed behind an Nginx reverse proxy, optimizing both performance and reliability.
- **Compute:** Built on cloud-based virtual machines with containerized deployments to ensure flexibility and easy scaling.
- **Data Storage:** Incorporates Blob Storage for large datasets and MySQL for metadata management, alongside utilizing a vector database like ChromaDB for enhanced retrieval of analytical insights.
- **Security:** Enforces TLS encryption protocols and incorporates role-based access control to protect sensitive medical data.

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5 Target Customers

DeepMed's customer segmentation strategy identifies varying levels of need to tailor offerings effectively:

1. **Primary Segment:** Small clinics and independent practitioners looking for affordable and intuitive AI solutions to optimize patient care management.

2. **Secondary Segment:** Research labs and diagnostic centers that require advanced analytics tools to improve research methodologies and diagnostic accuracy.

3. **Tertiary Segment (Year 2+):** Larger hospitals and healthcare software integrators who wish to enhance existing systems with DeepMed's AI capabilities.

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6 Go-to-Market Strategy

6.1 Phase 1: Pilot & Feedback (Months 0–6)

- Initiate onboarding with a select group of pilot users, focusing on clinics that represent a cross-section of potential customers.
- Develop and provide free training workshops and onboarding sessions to facilitate user adoption.
- Iterate on product features and usability based on collected feedback to ensure alignment with user needs.

6.2 Phase 2: Local Scale (Months 7–16)

- Aim to convert pilot users into paying subscribers, leveraging exceptional customer service and significant demonstrated value.
- Host online educational webinars that highlight the functionalities of the platform and use cases in healthcare.
- Form strategic partnerships with local health organizations to enhance credibility and encourage word-of-mouth marketing.

6.3 Phase 3: Regional Expansion (Months 16–32)

- Roll out bilingual support to cater to a diverse customer base, ensuring inclusivity across different language speakers in the target regions.
- Establish reseller partnerships with regional healthcare technology distributors to broaden market reach and penetration.
- Actively participate in industry events such as medical conferences to raise awareness and promote the platform among healthcare executives and decision-makers.

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7 Business Model & Pricing

7.1 Usage-Based Pricing

DeepMed has developed a flexible pricing structure that caters to various types of users:

Service	Base Fee	Incremental Fee
Tabular Training	\$1.00 per run	+\$0.10 per additional 1,000 rows
Image Training	\$2.00 per run	+\$0.15 per additional 100 images

Tabular Prediction	$0.10 per record	N/A
Image Prediction	$0.20 per image	N/A

7.2 Bundles

To facilitate user entry, DeepMed offers accessible package options:

- **Starter Package:** $20 for 5 trainings and 100 predictions, ideal for evaluating the platform's capabilities.
- **Clinic Package:** $100 for 30 trainings and 500 predictions, targeting small-to-mid-sized clinics with higher usage requirements.

7.3 Subscriptions

Monthly subscription options designed for consistent users include:

- **Essential Plan:** $25/month for 10 trainings and 200 predictions, appealing to independent practitioners looking to begin their AI journey.
- **Professional Plan:** $50/month for 30 trainings and 800 predictions, tailored for small clinics with more extensive needs.

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8 Competitive Analysis

DeepMed's competitive advantages are straightforward and impactful:

Feature	DeepMed	General ML Platforms	Medical-AI Vendors
No-Code Workflow		Partial	
Drag-and-Drop UI			
Automated Benchmarking			
Local Processing			
Transparent Pricing			
Regional Focus			

DeepMed positions itself uniquely by offering an intuitive product that blends powerful AI capabilities with ease of use, particularly addressing the demands of the region's healthcare landscape.

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9 Financial Projections

The following financial metrics outline DeepMed's growth expectations over the next three years:

Metric	Year 1 (2025)	Year 2 (2026)	Year 3 (2027)
Paying Customers	20	75	200
Annual Recurring Revenue	$12,000	$60,000	$200,000
Gross Margin	70%	75%	80%

Monthly Burn Rate	$3,000	$5,000	$7,000

These projections anticipate a phased approach focused on reinvestment in research and development throughout the early years, with a strategy aimed at achieving break-even status by mid-Year 3.

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10 Risk Assessment & Mitigation

DeepMed recognizes several key risks and outlines corresponding mitigation strategies:

- **Customer Adoption Risk:** Addressed by providing comprehensive training sessions and ongoing support to ensure that users are fully equipped to leverage the platform.
- **Technical Scalability Risk:** Alleviated through modular design principles and containerized technologies that allow for rapid adjustments in resource allocation.
- **Competitive Risk:** Mitigated by establishing a strong regional presence and focus, combined with unique features that cater specifically to the needs of the healthcare environment.
- **Funding Risk:** Managed through careful operational planning, maintaining lean operations, and pursuing early revenue generation avenues, particularly through pilot programs and subscriptions.
- **Market Acceptance Risk:** Mitigated by engaging in active market research and gathering user feedback to tailor product offerings and ensure alignment with market demands.

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11 Roadmap & Milestones

DeepMed's strategic roadmap outlines critical milestones to achieve its objectives:

Milestone	**Target Date**
MVP Launch	June 2025
Pilot Completion	July 2025
Batch Predictions Release	September 2025
Bilingual Support Roll-Out	November 2025
Regional Partnerships Established	January 2026
Time-Series and Genomics Support Launch	Q2 2026
Explainability Toolkit Release	Q4 2026

This roadmap reflects DeepMed's detailed planning and commitment to executing its vision effectively over the coming years.

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12 Conclusion

DeepMed addresses critical gaps within the healthcare sector by offering a straightforward, zero-code AI platform that facilitates advanced analytics for medical practitioners. With a solid plan, flexible pricing model, and a focus on regional market needs, DeepMed is well-positioned for significant growth and impact within the MENA healthcare landscape.

Next Steps:

1. Finalize pilot agreements with selected clinics to initiate product testing.
2. Enhance onboarding and training materials to facilitate user adoption and satisfaction.
3. Continuously iterate on platform features based on user feedback to ensure sustained alignment with user needs.