



API Dev for Medical Technology Company

PROJECT DETAILS

 API Development, Custom Software Development, DevOps Managed Services

 Nov. 2024 - Ongoing

 \$10,000 to \$49,999



"They implemented robust QC measures and advanced analytical tools."

PROJECT SUMMARY

Facile Technolab has developed a full stack web app for a medical technology company. The app features a UI/UX design, DICOMweb RESTful APIs, cloud-native storage specifications, and more.

PROJECT FEEDBACK

Facile Technolab has implemented QC measures and analytical tools, which have reduced the error rate associated with X-ray interpretation by 25%. The team adopts a customer-centric approach, fosters a collaborative culture, and possesses a clear strategic vision.



The Client

Please describe your company and position.

I am the Chief Technology Officer of Smart Surgery Technology

Describe what your company does in a single sentence.

Smart Surgery Tek uses intelligent instruments, robotic systems, and integrated software to enhance surgical precision, improve patient outcomes, and boost operational efficiency by bridging traditional practices with advanced technology.

The Challenge

What specific goals or objectives did you hire Facile Technolab to accomplish?

- To leverage their expertise in developing a robust and intuitive software solution for Medical domain-specific needs, including full-stack web application development, layered architecture, CQRS, Blazor web app, and Syncfusion.
- To create a platform that would streamline medical internal processes and enhance data management capabilities.
- To ultimately improve overall operational efficiency.



Manchi Leung

CTO, Smart Surgery Technology



Medical



Taipei, Taiwan

CLIENT RATING

4.0

Overall Score

Quality: 4.5

Schedule: 3.5

Cost: 4.5

Would Refer: 4.5



The Approach

How did you find Facile Technolab?

Referral

Why did you select Facile Technolab over others?

- High ratings
- Close to my geographic location
- Great culture fit
- Good value for cost
- Company values aligned

How many teammates from Facile Technolab were assigned to this project?

2-5 Employees

Describe the scope of work in detail. Please include a summary of key deliverables.

- Medical Imaging Viewer Standards (e.g., VolView): Standardize medical imaging viewers to address inconsistencies in data presentation, interoperability, and learning curves. Focus areas include UI/UX, interoperability with EHR/PACS, performance benchmarks, security/privacy, and extensibility.
- DICOM Industry Standards for Web Services & Storage: Standardize DICOM for web services and modern databases. This involves DICOMweb RESTful APIs, cloud-native storage specifications, compatibility with NoSQL/relational databases, data archiving/retrieval methods, and security for web services.
- Full-Stack Interactive Medical Applications with WASM-based Blazor: Develop high-performance, full-stack medical applications using WebAssembly (WASM) and Blazor. This enables client-side image processing, unified C# development, rich UIs, cross-platform compatibility, and enhanced security.
- Event-Driven Architectures Utilizing CQRS Patterns: Implement event-driven architectures with CQRS for scalable, responsive, and maintainable medical applications. This provides improved



scalability, data consistency via event sourcing, flexibility, simplified business logic, and real-time analytics.

The Outcome

What were the measurable outcomes from the project that demonstrate progress or success?

- They implemented robust QC measures and advanced analytical tools that effectively minimized the occurrence of diagnostic inaccuracies. This resulted in a substantial 25% decrease in the error rate associated with X-ray interpretation, thereby enhancing patient safety and improving the reliability of medical diagnoses.
- Developed and deployed innovative solutions that optimized the retrieval and correlation of relevant X-ray images from vast medical databases. This led to a marked 12% improvement in the efficiency and effectiveness of locating pertinent radiographic studies, facilitating more comprehensive comparative analyses and supporting better-informed clinical decisions.

Describe their project management. Did they deliver items on time? How did they respond to your needs?

Strategic Monitoring and Feedback: Proactive progress tracking and integrated feedback are crucial for success. We'll monitor KPIs and milestones, welcome constructive criticism, and thoughtfully integrate diverse perspectives to refine strategies.

AI for Efficiency: AI will automate meeting minute tracking and summarization, freeing up human resources for higher-value tasks and deeper engagement in discussions.

Continuous Learning: We are committed to fostering a learning culture. Technical leadership will provide support, resources, and mentorship for ongoing skill development, ensuring an adaptable, innovative, and resilient workforce.

What was your primary form of communication with Facile Technolab?



- Virtual Meeting
- Email or Messaging App

What did you find most impressive or unique about this company?

This company distinguishes itself through four core strengths: innovative R&D, a customer-centric approach, a collaborative culture, and a clear strategic vision. These pillars drive market leadership, demonstrate a strong commitment to the .NET ecosystem and Foundation, and underpin a robust layered architecture, ensuring the company delivers groundbreaking, reliable, and adaptable solutions while consistently exceeding expectations and fostering sustainable growth.

Are there any areas for improvement or something Facile Technolab could have done differently?

- Continued Investment in .NET Technology and Ecosystem: Facile Technolab should maintain its commitment to the .NET technology stack. This involves not only keeping current with the latest versions and frameworks but also proactively investing in comprehensive training for its development team. This training should encompass advanced design patterns, best practices for modern software architecture, and the intricacies of DevOps specifically tailored for the Google Cloud Platform (GCP) environment. Furthermore, a strong emphasis on cybersecurity training and the implementation of robust security measures within the .NET development lifecycle is paramount to protect sensitive data and systems.
- Sustained Development of Medical Domain Technology: The medical domain presents significant opportunities for innovation and impact. Facile Technolab should continue to dedicate resources to developing specialized technologies for this sector. This includes researching and implementing solutions that address specific challenges in healthcare, such as medical imaging, patient data management, diagnostic tools, and assistive technologies. Collaborations with medical professionals and institutions could further enhance the relevance and effectiveness of these developments.



- Integration and Development of AI Capabilities as a Strong Portfolio Element: To remain at the forefront of technological advancement, Facile Technolab must strategically integrate and develop artificial intelligence (AI) capabilities. This should be a core component of its portfolio, moving beyond basic AI applications to more sophisticated areas. Specific focus should be placed on: * Agentic AI: Developing AI systems that can autonomously perform tasks, make decisions, and interact with complex environments, potentially revolutionizing processes in both general and medical domains. * Model Context Protocol: Researching and implementing advanced methods for managing and understanding the context in which AI models operate. This includes improving the ability of AI to interpret nuanced information, handle ambiguities, and provide more accurate and relevant outputs, particularly crucial in sensitive fields like healthcare where precision is vital.

