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Enhancing Patient Outcomes During Orthopedic Surgery Leveraging AI and User Centric Design

Elevating patient engagement through app modernization and advanced analytics solutions

With a relentless pursuit of innovation and a disruptive mindset, a US-based health-tech organization pioneers cutting-edge software solutions aimed at alleviating the burdens of clinical data collection, forecasting patient outcomes, enhancing the efficiency of joint replacement surgeries and most importantly, improving patient outcomes. The company's intelligent applications, with intuitive user interface, are designed to streamline clinical data collection and seamlessly integrate digital imaging technologies.

Navigating Complexity: Implementing Computer-Assisted Surgical Techniques

Orthopedic surgeries typically challenge in fostering patient engagement, especially in the areas of monitoring patient progress effectively. Further, they have complexities of implementing and mastering computer-assisted surgical techniques, which demand specialized training and expertise. While these techniques undoubtedly offer manifold benefits for both patients and surgeons, they can also prolong surgical durations and contribute to variations in surgical outcomes.

Moreover, the process of clinical data collection is time-consuming, with inefficient preoperative assessments amplifying the burden. Other challenges include patient registration errors, and system malfunctions.

Logistical hurdles arose in ensuring the consistent availability, maintenance, and optimal performance of specialized equipment and infrastructure.

AI-Powered Insights for Improved Health Outcomes and Care Delivery

In order to address these industry challenges, the health tech company decided to partner with Brillio.

Central to the solution was the development of a comprehensive iPad application aimed at streamlining clinical data collection, forecasting patient outcomes, and optimizing the efficacy of hip and knee replacement surgeries.

The data collection process was streamlined through a dynamic iPad form directly accessible to patients, while an AI-powered platform swiftly computed multiple scores and analyzed hip or knee X-rays, furnishing physicians with invaluable insights for informed decision-making.

Furthermore, it empowered patients to monitor their progress during the postoperative phase, enabling a comparative analysis between preoperative and postoperative assessments to aid physicians in tracking and optimizing patient outcomes.

The platform's intuitive design facilitates seamless assessment completion from the comfort of patients' homes, fostering collaborative engagement with their healthcare providers throughout the surgical journey.

Transforming Surgical Procedures Through Real-time Data and Advanced Analytics

The implementation of the platform has fostered enhanced collaboration among doctors, nurses, and patients, culminating in improved patient outcomes. Real-time measurements and alerts during surgeries have facilitated performance optimization, enabling surgeons to make data-driven decisions for optimal results. Furthermore, the incorporation of a sophisticated calculation algorithm has empowered healthcare professionals with advanced analytics capabilities, further enhancing the quality of care provided.

The platform ensures precise and dependable results, fostering trust in medical interventions, with **Enhanced Accuracy and Reliability.**

Advanced analytics aid in achieving **optimal implant fit and alignment,** promoting better outcomes and patient comfort. Additionally, proactive monitoring and data-driven decision-making help **mitigate risks,** leading to fewer post-operative complications. Through these optimized procedures and personalized care, patients also experience **swifter recuperation periods.**

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ABOUT BRILLIO

Brillio is one of the fastest growing digital technology service providers and the partner of choice for many Fortune 1000 companies seeking to turn disruptions into competitive advantages through innovative digital adoption. We help clients harness the transformative potential of the four superpowers of technology: cloud computing, Internet of Things (IoT), artificial intelligence (AI) and mobility. Born digital in 2014, we apply our expertise in customer experience solutions, data analytics and AI, digital infrastructure and security, and platform and product engineering to help clients quickly innovate for growth, create digital products, build service platforms, and drive smarter, data-driven performance. With 17 locations across the US, the UK, Romania, Canada, Mexico, and India, our growing global workforce of nearly 6,000 Brillians blends the latest technology and design thinking with digital fluency to solve complex business problems and drive competitive differentiation for our clients. Brillio was certified by Great Place to Work in 2021, 2022 and 2023.

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