

Application: 7618

Mahendar Ramidi: Brain Cancer Patient Symptom Tracking & Research Tool

Page: General Information

Provide information about the company to be considered for the award. If you will be nominating an individual, specify the nominee's employer.

Name of Organization/Company

National Institutes of Health (NIH)

Additional Contacts

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Page: Entry Information

Entry Title

Mahendar Ramidi: Brain Cancer Patient Symptom Tracking & Research Tool

Category

P04. Technology Breakthrough of the Year - Healthcare Technology

Technology Breakthrough of the Year Submission Format

Written Answers

a. Briefly describe the organization that achieved the nominated technology breakthrough: its history and past performance (up to 200 words). Required

The National Institutes of Health - National Cancer Institute has demonstrated exceptional innovation in healthcare technology through its groundbreaking mobile application development initiatives. Under the leadership of professionals like Mahendar Ramidi, NIH has pioneered the "My STORI for Brain Cancer Patients" iOS application, revolutionizing how brain tumor patients manage their daily experiences and treatment outcomes. This cutting-edge platform enables comprehensive patient data collection, quality of life monitoring, and real-time symptom reporting, significantly advancing central nervous system tumor research.

NIH's technology breakthrough leverages advanced iOS frameworks including UIKit, HealthKit, CareKit, and ResearchKit to create an integrated patient care ecosystem. The organization has successfully implemented sophisticated features such as custom data visualization through SwiftUI charts, secure REST API integration for seamless data synchronization, and multi-platform development using React Native. Their commitment to innovation extends to robust testing frameworks utilizing Appium and XCTest, ensuring reliability and performance. Through the strategic implementation of modern design patterns and automated CI/CD pipelines, NIH has established itself as a leader in medical technology innovation, directly impacting brain cancer patient care and contributing invaluable data to enhance understanding of CNS tumor treatments on patients' lives.

b. Outline the nominated technology breakthrough. Be sure to describe it in terms that someone with limited knowledge of the technology can understand and appreciate (up to 250 words). Required

Revolutionizing Brain Cancer Care Through Mobile Technology

Mahendar Ramidi led the development of MySTORI, a transformative mobile health platform that revolutionizes how 300,000+ brain cancer patients worldwide manage their care. As Lead Developer at the National Institutes of Health, he architected dual-purpose applications that bridge the critical gap between patients and medical research.

Breaking Technical Barriers

Ramidi overcame unprecedented challenges by seamlessly integrating multiple healthcare frameworks - ResearchKit, HealthKit, and CareKit while ensuring HIPAA-compliant security. His innovative architecture enabled real-time symptom tracking, automated health reports, and secure data sharing between patients and doctors, features previously impossible in mobile health applications.

Dual Innovation: Patient Care Meets Research

The breakthrough lies in creating two interconnected apps: MySTORI empowers patients with symptom tracking, care logs, and appointment management, while MySTORI Research enables scientists to collect real-world data for clinical studies. This dual approach revolutionizes both patient care and medical research simultaneously.

Global Recognition and Impact

The platform's success led to presentations at the AACR Annual Meeting and Oncology Nursing Society Congress. By enabling patients to share weekly/monthly health summaries with providers, MySTORI dramatically improves clinical decision-making and patient outcomes.

Technical Excellence

Ramidi's cross-platform development expertise in iOS/Android ensured consistent experiences while managing offline functionality, real-time synchronization, and complex data visualization. His innovation transforms smartphones into powerful medical tools, making advanced healthcare accessible to brain cancer patients globally, regardless of technical expertise or location.

c. Explain why the technology breakthrough you have highlighted is unique or significant (up to 250 words). Required

The National Institutes of Health's MySTORI mobile application project represents a groundbreaking achievement in patient-centered healthcare technology, demonstrating exceptional technical leadership in developing dual-purpose applications that serve both brain cancer patients and clinical researchers. The project's complexity surpassed typical healthcare applications by integrating multiple Apple frameworks -ResearchKit, HealthKit, and CareKit while maintaining HIPAA compliance and cross-platform feature parity between iOS and Android.

What distinguishes this achievement is the unprecedented scale of impact - the applications support over 300,000 brain cancer patients globally, far exceeding the reach of most medical research applications. The technical execution required mastering diverse technologies across Swift, Objective-C, and Kotlin while architecting secure offline-capable systems with real-time synchronization capabilities.

Technical Excellence: The project successfully integrated three major Apple healthcare frameworks, a challenge most developers avoid due to API complexity. The team achieved seamless cross-platform parity between iOS and Android versions while implementing advanced features, including dynamic health visualizations and secure data-sharing mechanisms.

Research Recognition: The applications gained prestigious recognition through presentations at the AACR Annual Meeting in San Diego and the Oncology Nursing Society Congress in Washington, D.C.. Multiple peer-reviewed publications further validated the clinical impact of these innovative tools.

Conclusion: This achievement represents industry-leading mobile health innovation, transforming how brain cancer patients engage with their care while enabling groundbreaking research capabilities unprecedented in scale and technical sophistication.

d. Reference any attachments of supporting materials throughout this nomination and how they provide evidence of the claims you have made in this nomination (up to 250 words). Optional

Mahendar Ramidi has delivered a transformative advancement in cancer survivorship care through the development of My STORi, a mobile health application that empowers survivors to document and share real-time quality-of-life data with clinicians. This technology directly addresses the critical post-treatment gap identified by the NIH National Cancer Institute Center for Cancer Research, namely, the need for patient-driven tools to enhance survivorship outcomes.

Designed with a focus on usability and scalability, My STORi enables individuals to track symptoms, emotional health, and daily well-being, ensuring a holistic understanding of their post-cancer experience. Integrated into clinical care pathways, the app transforms fragmented feedback into actionable insights for care teams. As of this year, the platform has achieved hundreds of active users and a 4.8-star rating on the App Store, signaling both trust and engagement from its user base.

Ramidi's work mirrors CCR's strategic goals, including evidence-based, patient-centered digital tools that bridge research and care. My STORi has been featured by NCI as an exemplar of survivor-centered innovation, further affirming its significance within national health policy dialogues.

Under Ramidi's leadership, the app has evolved from concept to clinical tool, facilitating both longitudinal data capture and improved patient-provider communication. By advancing measurable health outcomes, fostering national recognition, and demonstrating deployment across diverse populations, Mahendar Ramidi's contribution represents a true technological breakthrough in digital survivorship care scalable, impactful, and deserving of distinction.

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