BIGRIO

EMPOWERING DATA

A Leading Research Institute Reinvents Outcomes Research with AI-Assisted Coding

The Client

A globally recognized research center, has been at the forefront of innovation in sports medicine, musculoskeletal health, and patient outcomes. Its mission has always been to advance discoveries that improve patient care worldwide.

The Challenge: Legacy Systems Limiting Innovation

Despite years of leadership in healthcare outcomes research, the institute found its innovation hampered by aging infrastructure. Rigid architecture slowed development, making it difficult to integrate new tools or collaborate seamlessly across teams. Inefficient workflows consumed valuable research time, while gaps in data prevented real-time insights. On top of that, rising compliance and security risks introduced new vulnerabilities. The institute faced a choice: continue operating within the limits of legacy systems or reinvent its digital foundation to accelerate research and maintain its leadership position in the field.

Challenges

- Outdated architecture slowed innovation and adaptability
- Limited interoperability hindered collaboration across teams
- Inefficient workflows drained valuable research time
- Data gaps prevented real-time insights
- Rising security and compliance risks created vulnerabilities

Rebuilding the Research Platform with AI-Assisted Coding

The institute chose to partner with BigRio to reimagine its research platform, embracing AI-assisted coding. This approach transformed the way developers worked. Rather than getting bogged down in repetitive coding tasks, the team could rely on AI to scaffold components, generate code snippets, stabilize unit tests, and maintain linting, formatting, and CI pipelines. The AI also supported initial design workflows through Figma integration, allowed rapid prototyping, and verified that development met acceptance criteria.

With AI handling the repetitive and time-consuming elements, developers could focus on high-value work, such as solution design, performance optimization, scalability, innovation, and cloud cost management. Documentation and API guidance were instantly available, amplifying knowledge across the team. The combination of human expertise and AI assistance enabled faster, higher-quality delivery while embedding compliance and governance into the platform from day one.

"This isn't just about modernizing technology. It's about creating a digital backbone that empowers clinicians and researchers to deliver better outcomes, faster, and with greater confidence."

— Rohit Mahajan, Managing Partner and CEO, BigRio

Key Uses of AI coding tools in the Project:

- Initial Development & Prototyping
- Acceptance Criteria Verification
- UI Design Integration
- Code Quality & Maintenance
- Testing & Validation
- Documentation & Knowledge Support

The Outcome: Reinventing Outcomes Research

By integrating AI-assisted coding into its development process, the institute accelerated delivery timelines and reduced operational inefficiencies, allowing research insights to reach clinicians faster than ever. The platform now supports seamless integration across multiple data sources, is scalable for wearables, imaging, and multimodal data, and provides a robust foundation for future digital health innovations. More than just a technology upgrade, this reinvention created a dynamic research ecosystem that enables the institute to continue leading in orthopedic innovation, turning discoveries into actionable insights that improve patient outcomes worldwide.

Results

- Faster delivery
- Seamless integration
- Reduced operational inefficiencies
- Scalable foundation ready for AI and innovation

Why BigRio

The institute chose BigRio not merely for technology implementation, but as a strategic partner capable of delivering transformative outcomes. BigRio brought deep healthcare expertise, having modernized platforms for a variety of organizations, combined with multidisciplinary talent that included engineers, clinical analysts, UX designers, and compliance experts. Beyond technical delivery, BigRio ensured knowledge transfer, DevOps handover, and code ownership, empowering the institute to maintain long-term autonomy while scaling future innovation.

"AI doesn't replace developers—it amplifies their expertise. By combining human insight with AI-assisted coding, we accelerated delivery while embedding compliance and scalability into the very core of the platform."

— Ritu Uberoy, Managing Partner, BigRio

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For more information on how BigRio can help you, contact us at info@bigr.io or click here.