
Case Study: How CUEs Partnered with Peakey to Redefine Efficiency and Innovation with Inspection Robotics

Introduction

When CUEs approached Peakey, they were already a leader in the field of inspection robotics, equipped with a cutting-edge robot featuring multiple cameras capable of generating a detailed point cloud for inspections. However, they saw an opportunity to enhance their offering by integrating AI capabilities to streamline and improve their inspection capabilities. What began as a targeted project soon grew into a comprehensive partnership, with CUEs entrusting us with the evolution of their entire robotic product.

This case study explores how Peakey helped CUEs achieve their goals—delivering robust solutions on time and on budget while exceeding expectations and driving new innovations.

Background: The Challenge

CUEs had developed an advanced inspection robot designed for critical field applications. The robot utilized multiple cameras to generate a 3D point cloud for detailed inspections. However, the manual process of translating this data into actionable inspection forms was time-intensive and prone to variability.

The company envisioned leveraging AI to automate and enhance this process, enabling their customers to complete inspections more efficiently and with greater accuracy. They turned to Peakey to bring this vision to life.

This initial project was clear in scope: integrate AI capabilities to interpret the point cloud data and automate as much of the inspection form completion as possible. But as the collaboration progressed, the relationship evolved in unexpected and exciting ways.

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The Solution: Delivering Excellence Beyond Expectations

AI-Powered Inspection Form Automation

Peakey began by focusing on CUEs core request: implementing AI to analyze the point cloud data captured by the robot's cameras. We designed a solution capable of interpreting and processing the data, effectively automating the completion of inspection forms. This reduced human intervention, improved accuracy, and sped up the inspection process.

Thanks to meticulous project management and technical expertise, we delivered this solution on time and within budget, meeting all of CUEs initial expectations.

Expanding the Partnership

Impressed by the quality of our work, CUEs decided to entrust us with more of their development needs. They recognized our ability to not only implement robust solutions but also envision improvements and enhancements beyond their original scope.

Our expanded role included:

- 1. Redesigning the Mobile/Web Application**

The robot's existing live and mobile web application, used for controlling the robot and managing field inspections, required a complete overhaul. Peakey worked closely with CUEs to design a more intuitive and user-friendly interface. The result was a modern, responsive application that empowered field operators with much greater control and efficiency.

- 2. Revamping the Office Processing Appliance**

The appliance used for in-office data processing had several inefficiencies and broken components, impacting overall performance. We not only fixed these issues but also enhanced the system by seamlessly integrating the AI solution. This upgrade ensured smoother workflows and enabled CUEs to offer a more reliable product to their customers.

- 3. Developing the Final Web Application**

The final web application used by office users to organize data, view inspection results, and complete detailed reports was a critical component of CUEs ecosystem. However, it faced several challenges, including functional defects that disrupted workflows and limited its overall utility.

Peakey stepped in to address these issues, systematically identifying and resolving defects to ensure the application operated as intended. Beyond simply fixing existing problems, we collaborated closely with CUEs to understand their users' needs and identify opportunities for improvement.

As a result, we introduced new functionality that enhanced the application's capabilities, empowering users to complete tasks more efficiently and effectively. These enhancements went beyond patching—it was about creating a smoother, more robust user experience that elevated the platform to meet CUEs high standards.

Outcomes and Impact

The collaboration with CUEs yielded transformative results:

- **AI-Driven Efficiency:** Automating inspection form completion significantly reduced processing time, allowing CUEs customers to focus on higher-value tasks.
- **Enhanced User Experience:** Redesigned applications provided seamless workflows for both field operators and office users, improving overall satisfaction and productivity.
- **Reliable and Scalable Systems:** Fixing and upgrading the in-office processing appliance addressed critical pain points, ensuring the solution was future-ready.
- **Trust and Long-Term Partnership:** The initial project success established a strong foundation of trust, leading to a full-spectrum partnership.

Key Takeaways:

This case study underscores the value of a collaborative and adaptive approach to solving client challenges. For CUEs, what began as a focused project evolved into a transformative partnership, enabling them to:

- Leverage advanced AI to automate and enhance critical processes.
- Modernize and optimize their entire suite of applications.
- Deliver innovative features and capabilities to their customers.

For PeaKey, this engagement highlighted our ability to:

- Understand and address complex technical challenges.
- Deliver high-quality solutions on time and within budget.
- Build long-term client relationships based on trust and proven success.

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Conclusion

The partnership between CUEs and Peakey showcases how collaboration, technical expertise, and a commitment to excellence can lead to transformative results. By integrating AI, revamping critical systems, and introducing innovative features, we helped CUEs enhance their product offering and strengthen their position as a leader in inspection robotics.

Looking ahead, Peakey remains committed to supporting CUEs as they continue to innovate and deliver value to their customers.

Ready to bring your next project to life? Contact Peakey today to see how we can help you overcome development challenges and build something great.

Email: info@peakey.com

Phone: (888) 399-7539

Visit: www.peakey.com
