ADITI CONSULTING
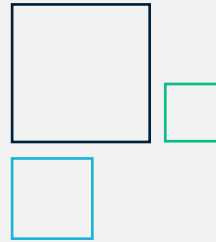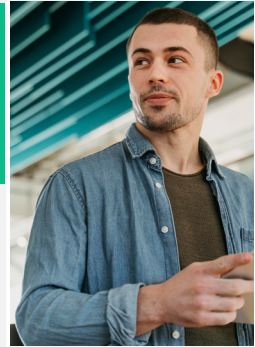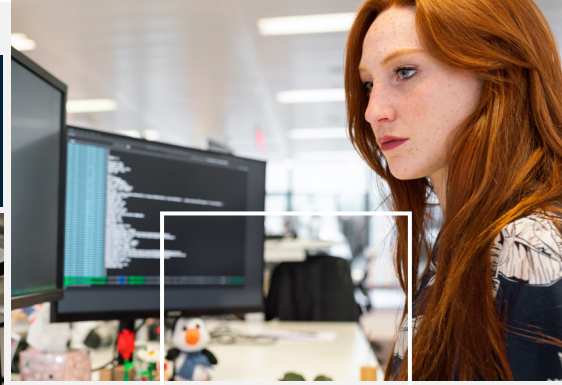
Data & Analytics, Automation

Autonomous Development in State-of-the-Art Perception Facility

Problem

One of the world's largest construction equipment manufacturers required more robust research processes and data-driven insights for new technologies surrounding autonomous equipment. The cutting-edge research was designed to develop autonomous systems that can use computer programs to drive vehicles, avoid obstacles, dump payloads, maximize operator safety, and more.

Solution

Aditi provided a full-cycle research and development solution, which included:

Profiling and Evaluation:

Aditi individually profiled containerized object detection and terrain mapping. Subsequently, a performance evaluation ensured seamless simultaneous operation.

Integration and Refinement:

Object detection and classification were integrated with advanced tracking software. The team refined computer vision algorithms, working with camera, LIDAR, and radar devices, ensuring accurate detection of objects.
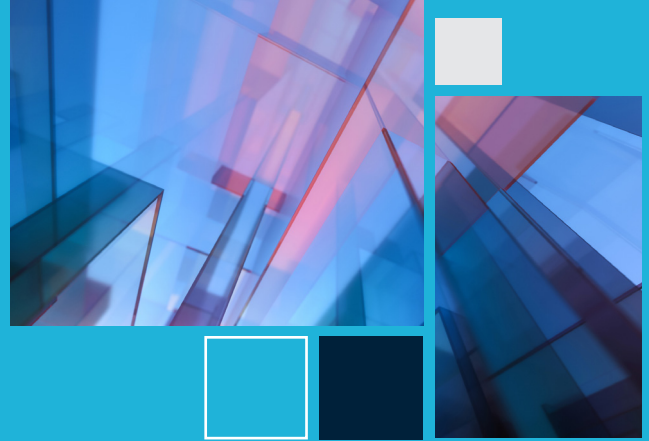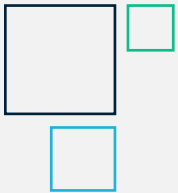
Versatile Code Development:

Aditi developed sophisticated code supporting object detection on CPU, GPU, and FPGA architectures, ensuring versatility and optimization based on specific hardware.

Result

Aditi's solution not only resolved immediate challenges for the world's largest construction equipment manufacturer but sparked strategic advancements. The heightened object detection and terrain mapping capabilities expedited prioritization in the Research and Development division and paved the way for potential technology licensing opportunities. This success bolstered the company's competitiveness, aligning seamlessly with its corporate vision and fostering a culture of continuous innovation. Aditi's intervention left an enduring impact, reshaping the organization's market presence and commitment to technological excellence.

Aditi Empowers Development Projects

Empower your development projects with Aditi's advanced technology solutions. Whether you're looking to innovate manufacturing processes or move your R&D projects forward, our capabilities in autonomous systems, object detection, and computer vision can elevate your operations. Explore the potential of cutting-edge technology to enhance efficiency and boost safety protocols. Connect with us today to discover how our team can tailor innovative solutions to meet your business needs across diverse sectors.

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