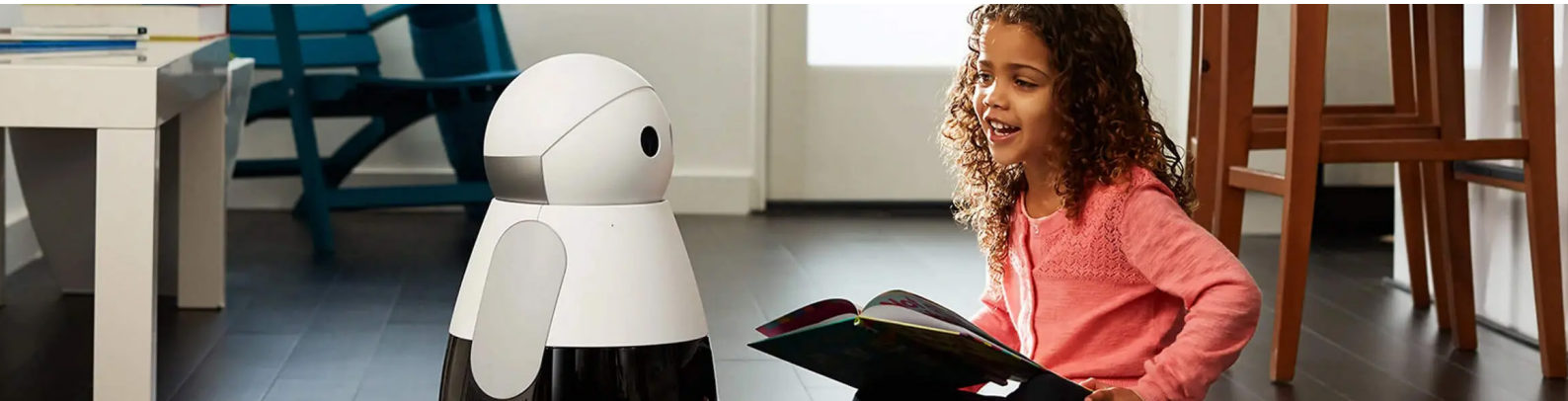


# Kuri, the Nimbl Companion Robot

**Client**

Mayfield Robotics

**Practice Areas**

Industrial

**Core Disciplines**

AI &amp; Advanced Algorithms

Mechanical Engineering

Transfer to Manufacture

Optical Science

Photonics &amp; Imaging

**Challenge**

Kuri required a sophisticated optical guidance system capable of simultaneous hazard detection, navigation, and real-time environmental mapping – in a compact, manufacturable architecture safe for use around humans and pets in unpredictable home environments. The system needed to achieve eye-safety certification and UL 3300 compliance while meeting aggressive cost targets and a demanding consumer product launch timeline.

**Solution**

Triple Ring applied deep expertise in optical system design and robotics integration to develop a multi-technology navigation platform combining pulsed VCSEL arrays, time-of-flight imaging sensors, and panoramic annular lens systems into a unified, cost-optimized architecture. The design supported wide field-of-view sensing and SLAM capability while maintaining full compliance with consumer eye-safety standards. Subsystem integration was carefully coordinated to meet aggressive launch timelines without compromising performance or certification requirements.

**Client Impact**

- Delivered an optical navigation system exceeding both cost and performance requirements while achieving eye-safety certification and UL 3300 compliance
- Enabled reliable navigation, hazard detection, and environmental mapping in dynamic consumer home environments
- Supported the successful commercial launch of Kuri with hundreds of units delivered to customers
- Generated multiple patent filings and contributed to Kuri being named CES 2017 Best in Show by leading technology publications

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