(ECE) Gesture-Controlled Robotic Desk Lamp

Problem — *Task lighting is critical to success and can be difficult to adjust to ideal. Color and brightness are often impossible to make correct.*

Description — *Develop a gesture-controlled desk lamp to provide rapid support to required changes in task lighting. The ideal solution would mount to the top of a cubical wall and respond to hand gestures of the user. The unit should include controlled features such as: brightness, focus, color, laser pointer, and position.*

Assumptions — *Unit should be able to effectively illuminate a surface 6' away. Gesture control should be vision-based in and near the field of illumination. Should operate from standard 110VAC and contain all sensors and control electronics. Programming may be through connection to computer.*

Deliverables — *Functional Prototype, Demonstration, Source Code, Design Files, Trade Studies, CDR, BOM. Classroom deliverables for review.*

Raytheon POC: *Alex Schulz, Alex Meadows*

Priority: 2