

# Automated Code Repair for Memory Safety (FY18-20)

## Project Objective

- Develop techniques to automatically repair both source code and machine code to eliminate memory-safety vulnerabilities.
- Customer: Line (LSI)

## Technical Approach

- Our technique identifies changes to the semantics of program sufficient to ensure memory safety and then translates those changes back the original source code, attempting to minimize the amount of change and the runtime performance overhead.

## Impact

- By developing a repair operation that yields maintainable code, we will create a tool can be used in practice to security-harden codebases at much less expense than a manual process.

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