

# Project Athena

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## PROBLEM STATEMENT

Wildfires are a problem. Wildfires are recurring and they affect millions of people. Moreover, wildfires have brought upon a lot of collateral issues. For example, wildfires have damaged residential areas, ecosystems, wildlife and financial sectors of society.



Figure 1: Firefighters battle a fire in Sylmar, California

Picture courtesy of: <https://www.sciencemag.org/news/2020/03/us-wild-fires-plummeted-2019-experts-say-it-won-t-last>

## BACKGROUND

Wildfires were once considered natural disasters that would occur as a regular cycle of the environment. But, nowadays we are experiencing wildfires that last multiple months and so are no longer being considered “natural.” Wildfires are occurring during seasons that should be low. Our robotic system will help combat this problem.

## SUMMARY OF WORK

Our team has been working on developing a quadrupedal robotic system that has the ability to traverse different terrains. Our efforts include:

- Circuit design
- Algorithm design
- Enabling electronic communication protocols
- And more

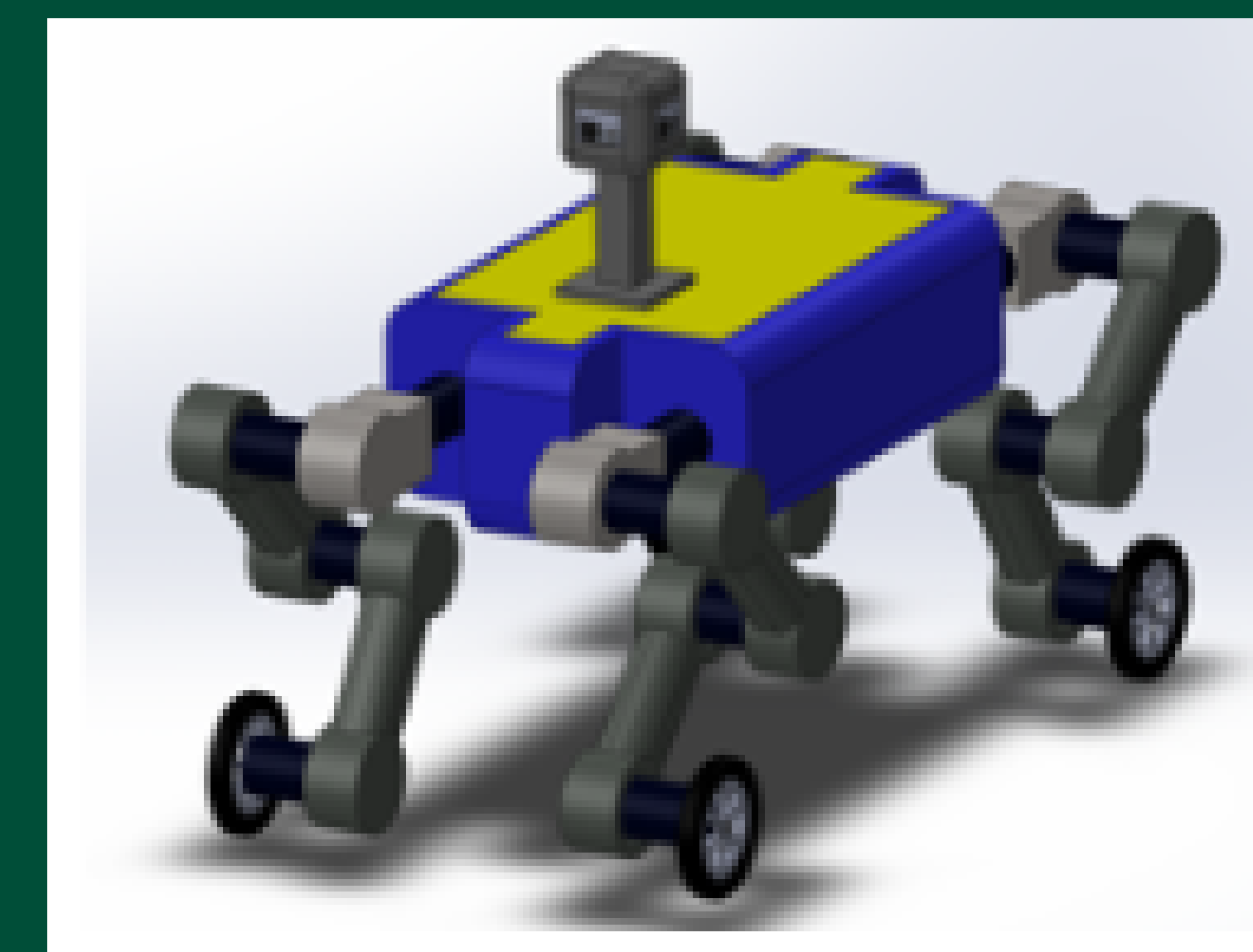


Figure 2: Project Athena First CAD Design

## IMPACT ON COMMUNITY

Our robotic system will assist firefighters in their recovery efforts through the use of object recognition in the following vital way:

- Distinguishing humans from objects and rubble