# Real Autobots and Decepticons

# Vision

# Version 1.0

Prepared by

**Carter Chase**

**Trevor Sietz**

**Ben Smith**

**Jeff Ross**

Prepared for

# The Analogical Constructivism and Reasoning Lab

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# Revision History

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# Vision

# Introduction

This document outlines the project vision for the self-reconfiguring robot research project conducted by senior students from the IPFW Department of Computer Science. The purposes of this document is to:

* Identify the project goal
* Identify the risks

# Problem Statement

The goal of our project is to achieve the unaided assembly of modular robots into a predetermined shape from random starting points. In simple terms, we want to be able to toss a bunch of modular robots onto a clean floor, have the robots find each other, and have them arrange into a chosen shape (like a plus or a square).

# Risks

1. The modular robots are being prepared and assembled by the engineering department. Should the engineering department fail to produce satisfactory robots, we will resort to using Roombas. Should the Roombas not produce results, we will fall back to a simulator.
2. The AI may not prove very robust. We will start by programming the AI to be relatively simple and then gradually improving it and its robustness.