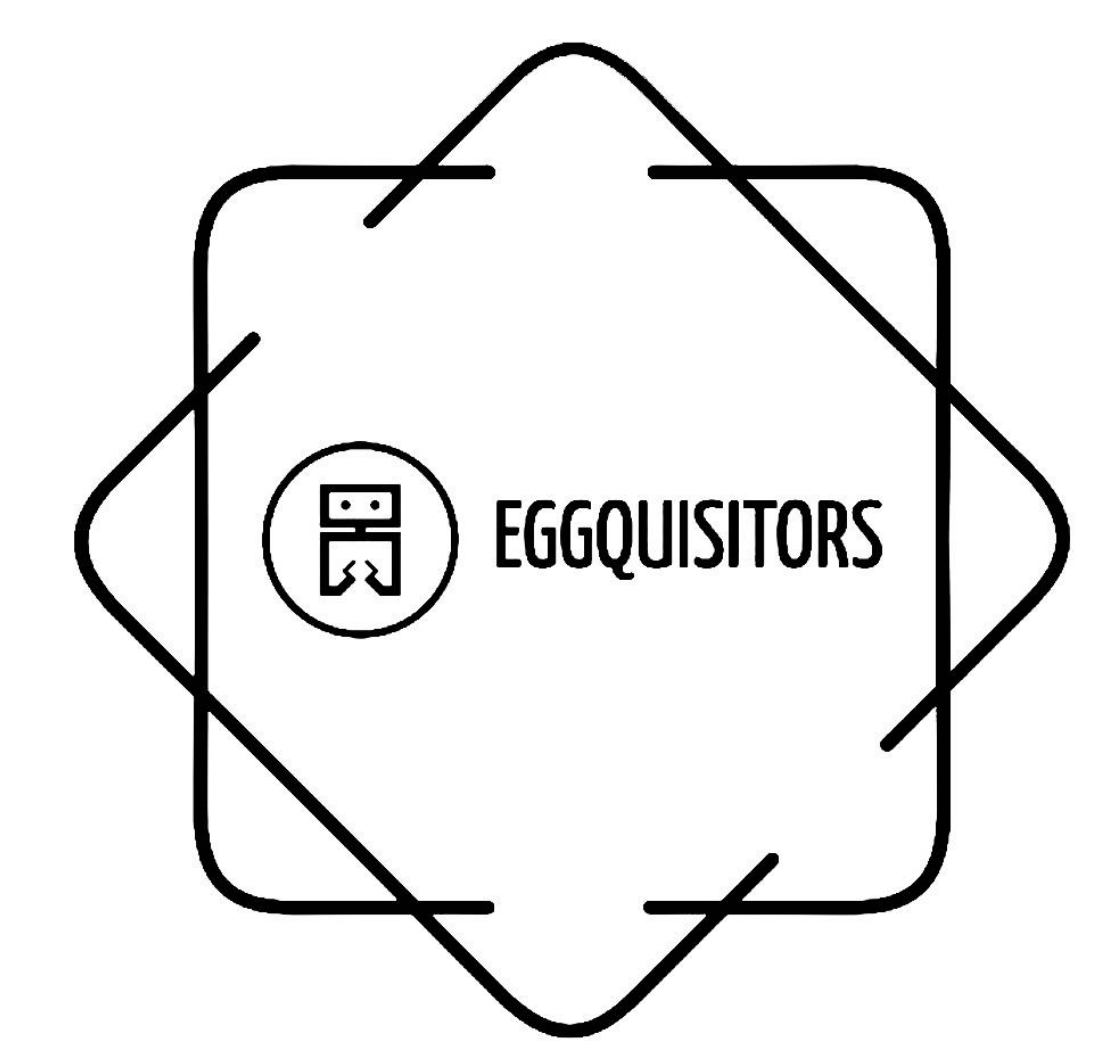


E2.09 – The Eggquistors

Artemio Reyes (PM), David Sharp, Cristian Gutierrez



The Team

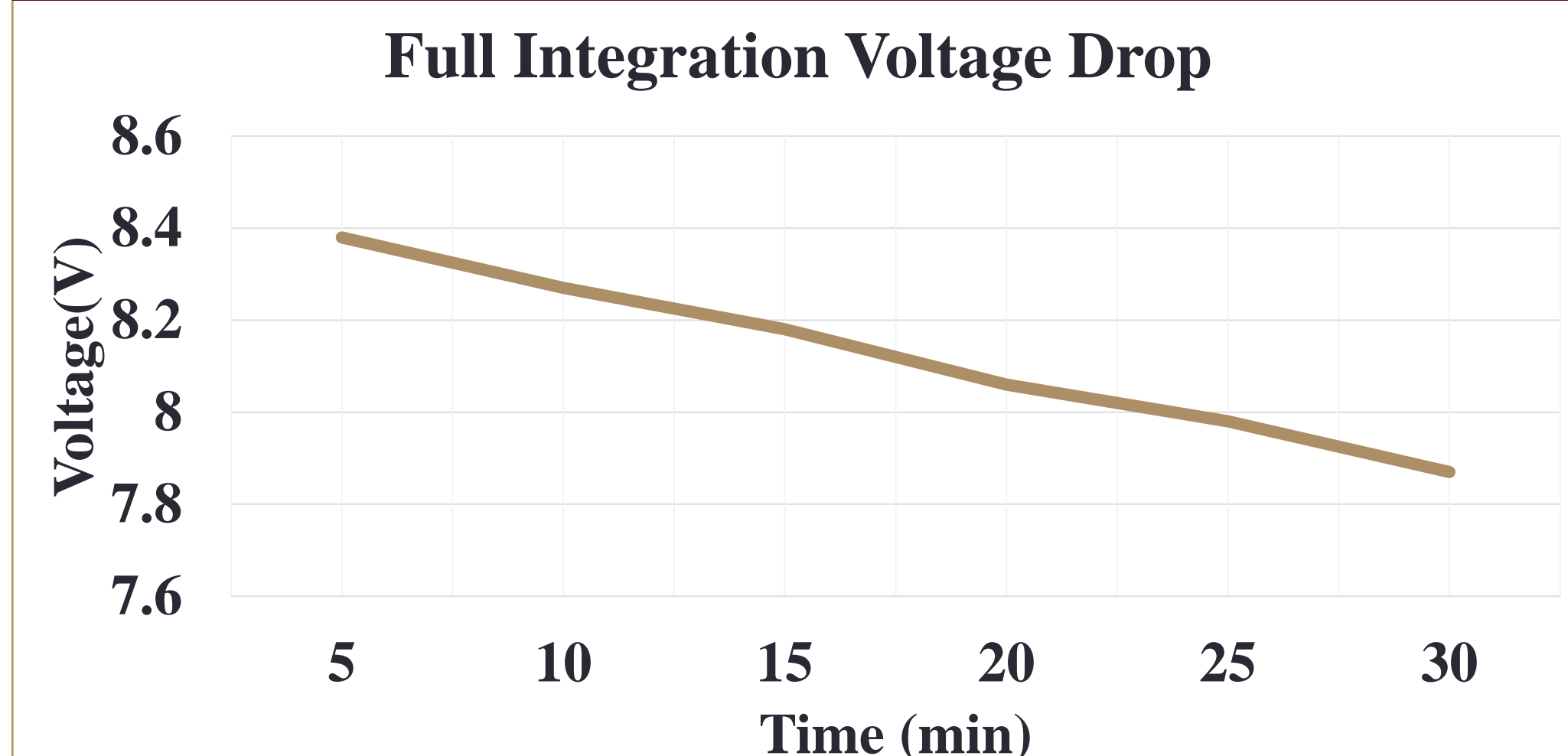


Our project is an autonomous egg fetching robot that will compete in fetching competitions.

Robot Specifications

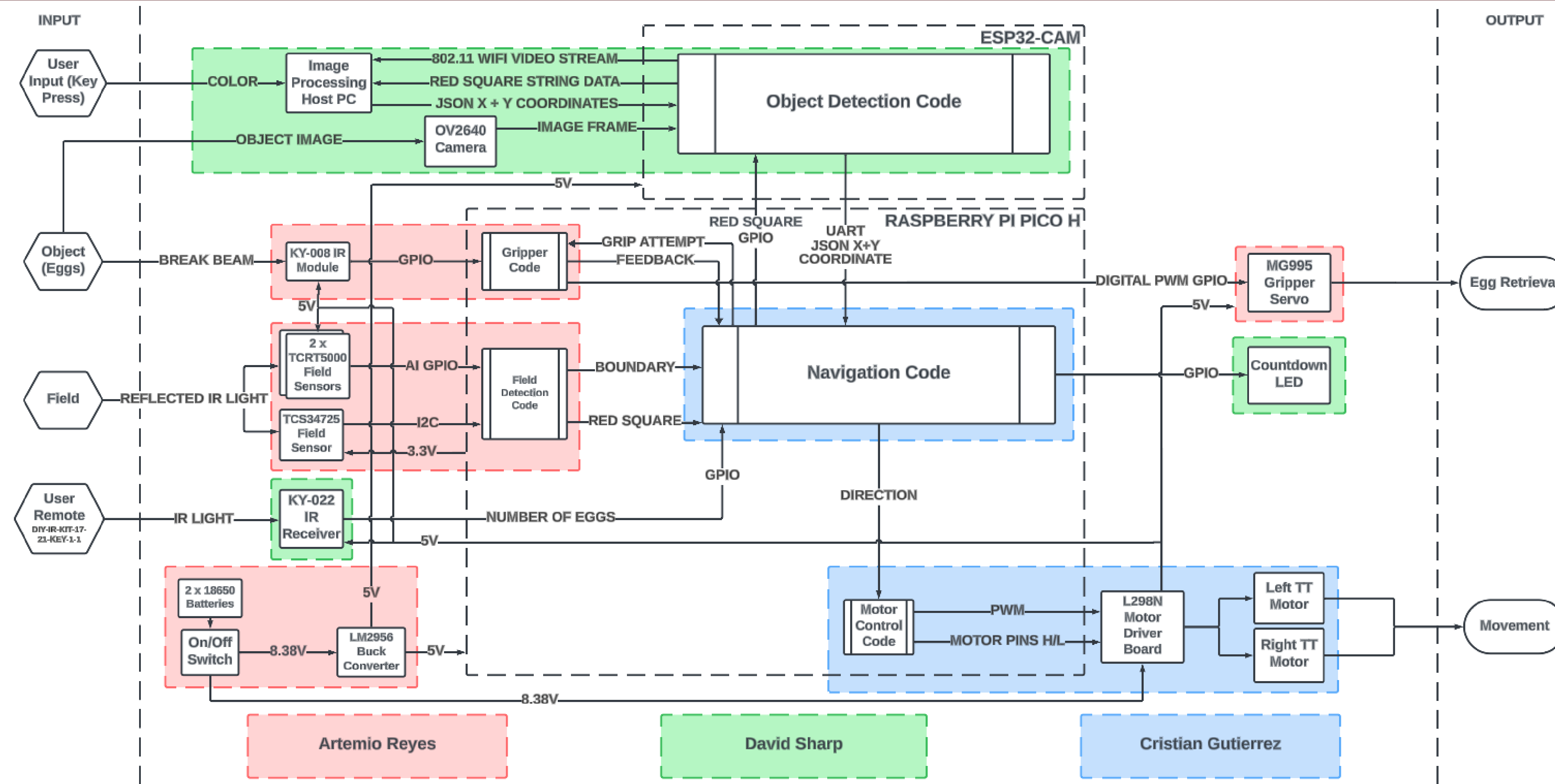
Requirement	Results	Outcome
Budget ≤ \$40	\$34.61	PASS
Weight ≤ 600g	739.4g	Sponsor Approved
Dimensions: 20cm(w) 20cm(h) 30cm(l)	17.8cm(w) 16.4cm(h) 31cm(l)	Sponsor Approved
20 – 40 minute lifetime	≥ 60 minutes	PASS
One Egg Retrieval	19/20 Average Time: 1:03	PASS
Two Egg Retrieval	19/20 Average Time: 1:27	PASS
Three Egg Retrieval	19/20 Average Time: 1:58	PASS

Power Test Results

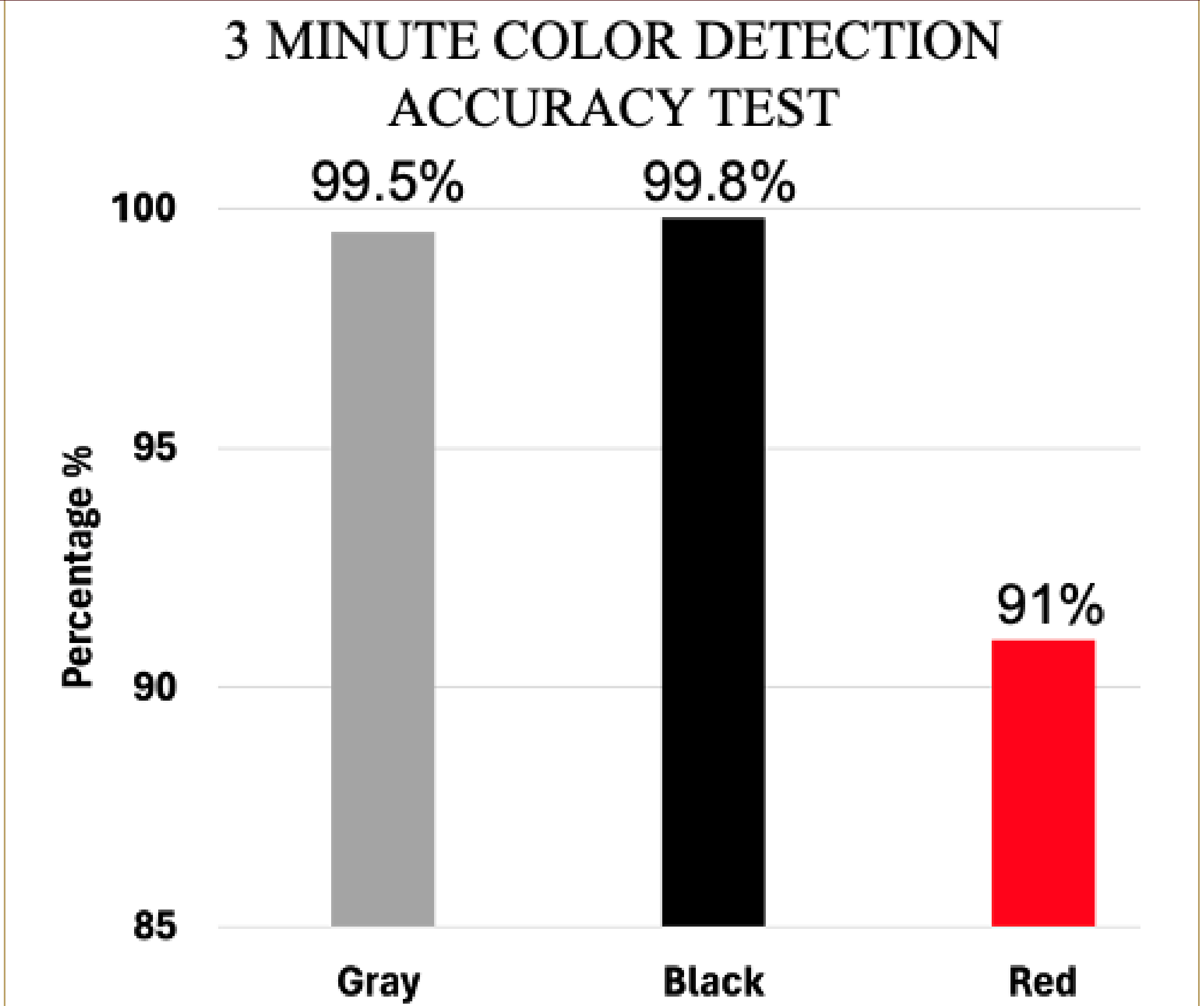


Requirements	Measured	Outcome
20 - 40 minutes	≥ 60 minutes	PASS

Top-Level Block Diagram



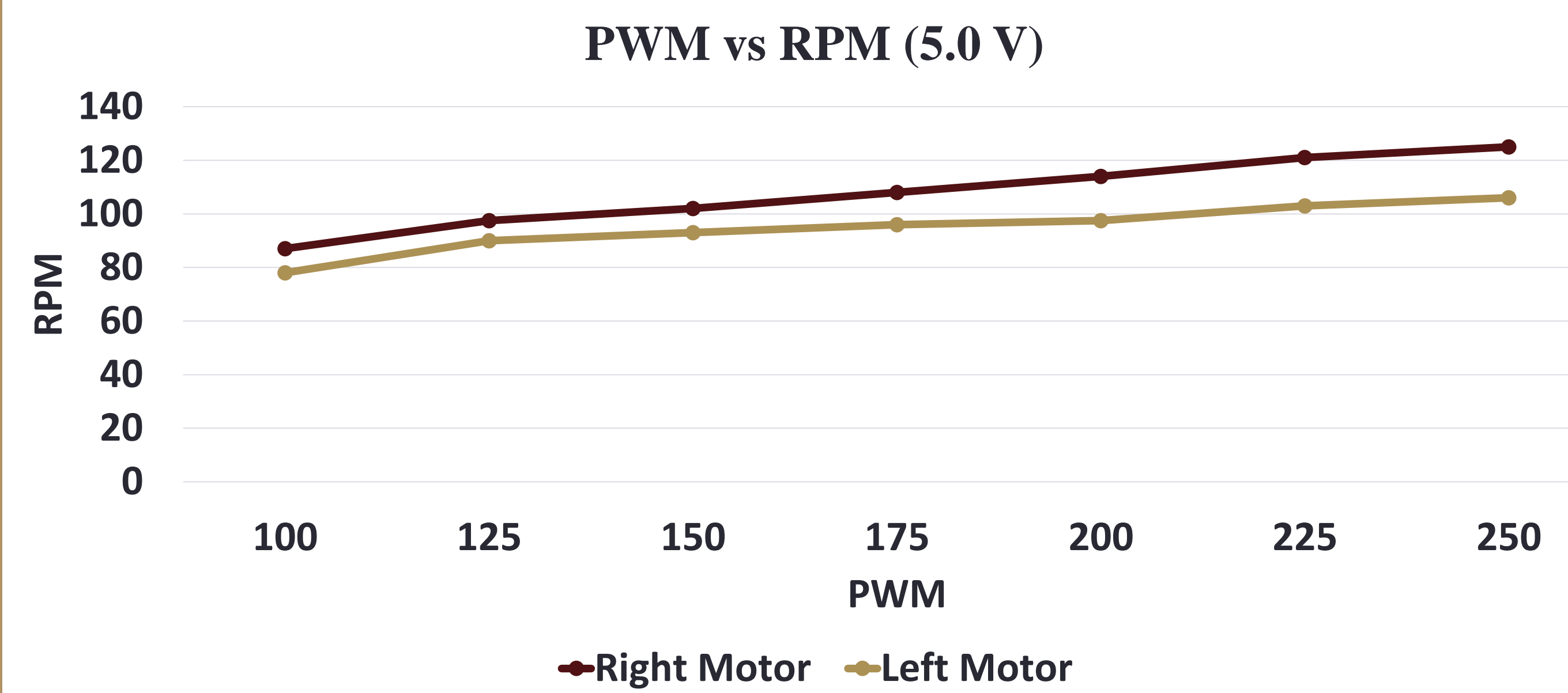
Field Detection Test Results



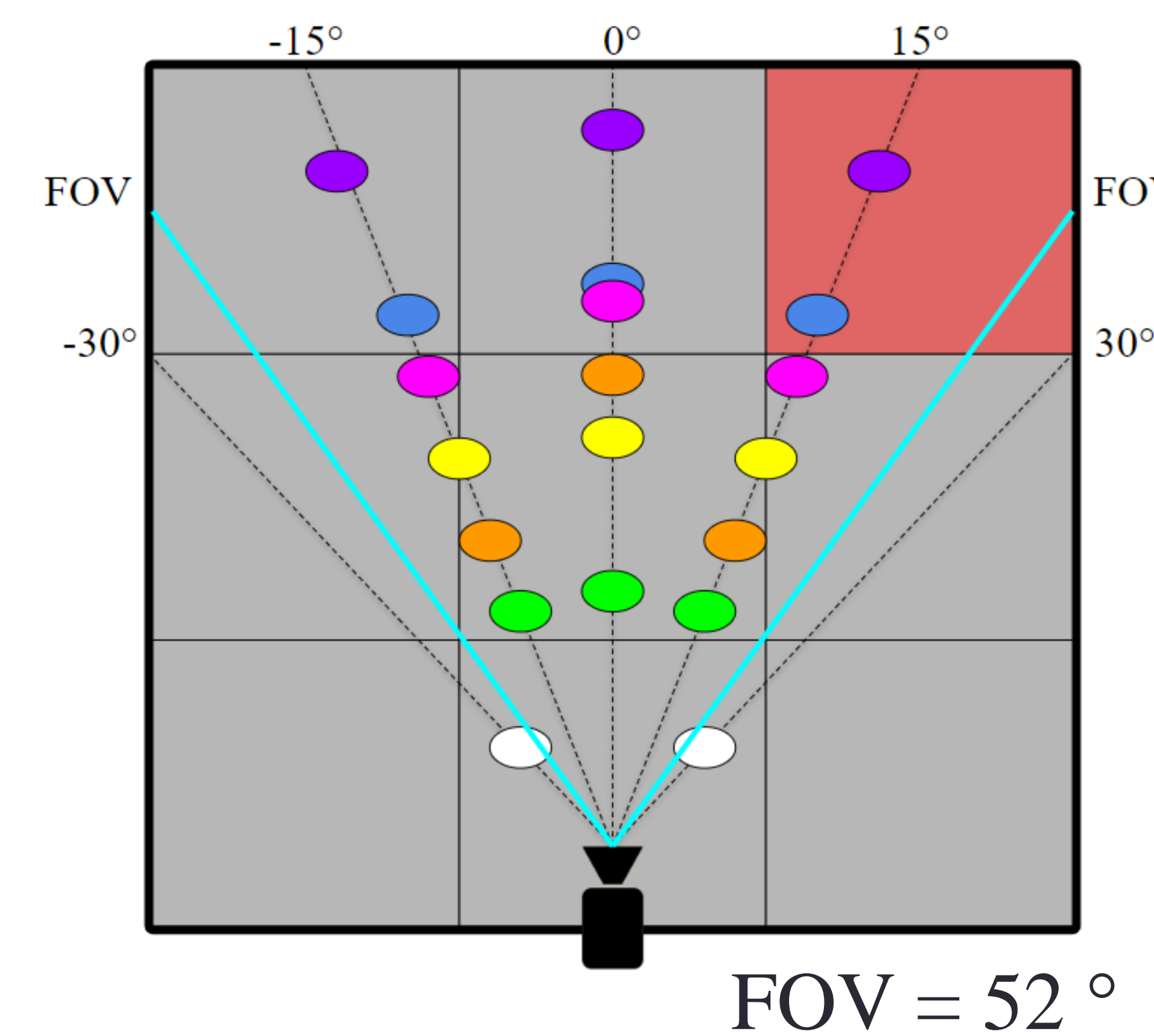
Navigation Test Results

Distance 2ft	Result	Outcome
0° Ahead	8/10	Pass
45° Left	9/10	Pass
90° Left	9/10	Pass
135° Left	10/10	Pass
180° Behind	10/10	Pass
45° Right	10/10	Pass
90° Right	10/10	Pass
135° Right	10/10	Pass

Motor Test Results

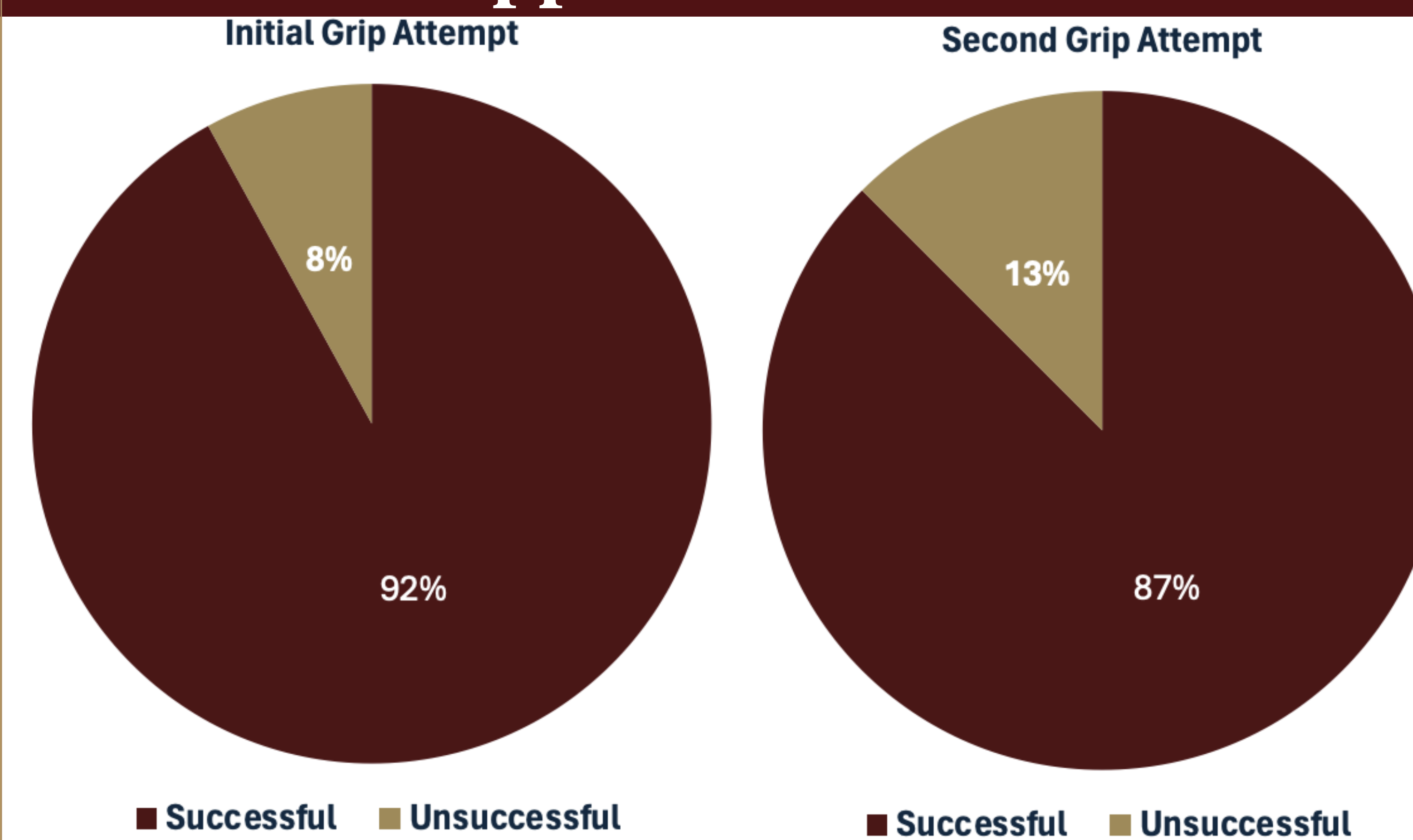


Object Detection Test Results

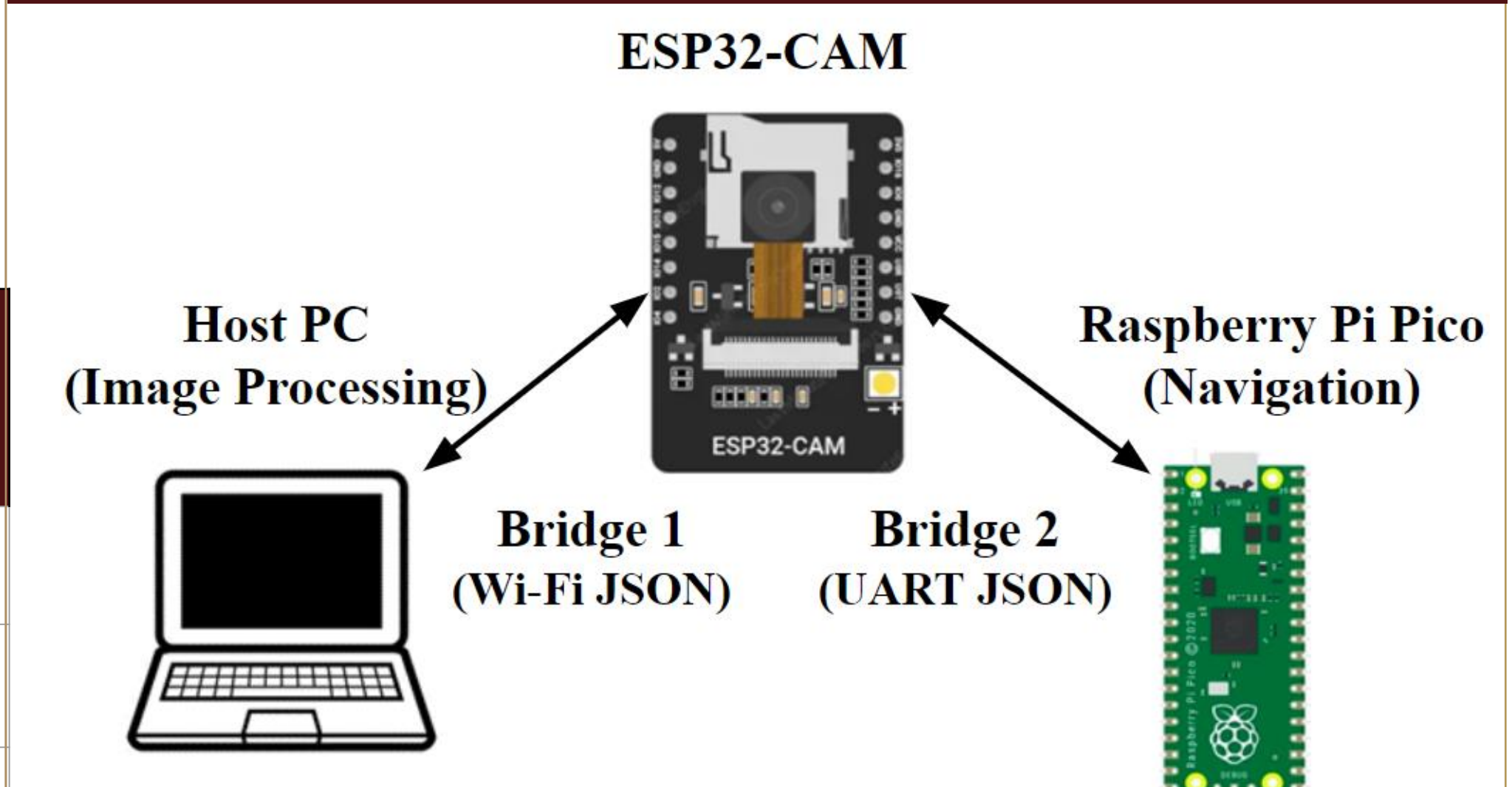


Egg Color	Distance (0°)	Distance (±15°)	Distance (±30°)	Outcome
Purple	60 in	60 in	12 in	PASS
Yellow	36 in	36 in	12 in	PASS
Green	24 in	24 in	12 in	FAIL
Orange	36 in	30 in	12 in	PASS
Pink	48 in	42 in	12 in	PASS
Blue	48 in	48 in	12 in	PASS

Gripper Test Results



Communication Network



Acknowledgements

Sponsor: Mr. Fawzi Behmann
Advisor: Mr. Jeff Stevens