



Model S Systems Testing

Palo Alto, California

Summer Internship, Olin Year 3

This summer was in Silicon Valley at **Tesla Motors**, the start-up luxury Electric Vehicle company that is disrupting the automotive scene. I had the opportunity to work on the recently-launched Tesla Model S.

I was one of 3 interns that interacted with the complete car on a daily basis at a system level. I did a variety of **user-behaviors and interaction testing** inside/outside the Model S.

These vehicle behavior tests took a lot of time and had to be repeated every time a new version of software was released for the car.

We could automate a huge section of these mechanical tests and it would save manpower and time.

Aim: To **automate manual regression tests** on the Model S. This would save the testing team 2+ hours per version of software.

Design: A fellow intern and I built a mechatronic system that:

1. **Actuates** the 17" touchscreen on the Model S,
2. **Simulates parts** of the car,
3. Runs the tests, compares it to the expected result, and reports pass/fail.

I worked on steps #2 & #3, which are on the **software side in C language**.

Overall, my internship was an amazing experience. I **went full-circle**: manually doing the mechanical tests and ending with a mechatronic system that can do the tests for me. I **worked on a meaningful project**, and enjoyed the fast-paced environment at Tesla.

