Adventures in “self-driving” model cars — Part 1

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A global race pushing the envelope of what a “self-driving” vehicle can do has been raging for years. Some of the promised benefits include dramatic reductions in the number of vehicle accidents and deaths. While billions of dollars are being spent on R&D by the big players (Automakers, UBER, trucking companies, etc.) there is also research and progress happening on a much smaller scale — 1/16 to be exact.

On Saturday, December 7, 2019, I had the pleasure of watching a few dozen “self-driving” model cars race each other on an indoor track in Oakland, California. I was impressed as a diverse group of people participated and watched model cars race around a track in multiple heats. While the typical car is “learning” to race using data gathered from an onboard video camera and matching it with how a human adjusts the steering and throttle, more sophisticated vehicles even employ cutting edge technologies such as [Lidar](https://en.wikipedia.org/wiki/Lidar). The speed and agility of some cars were astonishing.

It was also humorous watching as some cars crashed and/or drove like their “driver” was “under the influence”. On more than one occasion the audience, in unison, cheered and/or laughed out loud when a particularly dramatic crash/collision/etc. took place. Parents would be wise to keep younger observers far away from the edge of the track at certain corners — it was not uncommon to see a fast-moving car unable to navigate a turn at the end of the long straightaway!

In the spirit of keeping the competition as accessible as possible, there are a few different classes of competition. One popular class requires that the models be of 1/16 (or smaller) scale with a total build cost of $400 or less. Additionally, the last event of the day is a “free-for-all” race where all cars entered that day MUST compete —and the ensuing mayhem was fun to watch!

As a data scientist continually expanding my experience and capabilities, I’ve decided to throw my hat into this arena. I’ve ordered all the parts to build my first car and I plan to have the software and hardware ready to train for the next race in March 2020.

As I move forward I’ll be chronicling my failures and successes here on medium.com — stay tuned!

If you’re interested in learning more and/or getting involved, a great place to start is the [DIY Robocars](https://diyrobocars.com/) website and joining 2,306 (as of January 11, 2020) enthusiasts at [meetup.com](https://www.meetup.com/DIYRobocars/).

Many thanks to [DIY Robocars](https://diyrobocars.com/) for the many ways they support this community and to [Chris Anderson](https://twitter.com/chr1sa?s=20) for his enthusiasm at these events!