

## 93. AI for Cars

Dhaval Shroff introduced a groundbreaking project at Tesla, likened to "ChatGPT for cars," aimed at advancing self-driving technology through machine learning. His work focused on creating a neural network path planner that learns from human driving behaviors to navigate complex situations. Amidst a potential interest from Elon Musk to transition Shroff to work at Twitter, their meeting on December 2, 2022, underscored the importance of Shroff's project for Tesla's future in AI and self-driving technology.

Tesla's approach to self-driving had been rules-based, using visual data to dictate car behavior through programmed rules. Shroff's project proposed a shift towards a model that learns from human drivers, aiming to refine decision-making in driving by analyzing millions of human driving instances. This approach promised improved navigation, particularly in unexpected or complex scenarios, by mimicking successful human reactions rather than merely following predefined rules.

Musk, initially skeptical, was convinced of the project's value after demonstrations showcased its superiority over the conventional rules-based system. Envisioning a future where Tesla's advances in AI not only pertained to self-driving but also integrated with initiatives like the Optimus robot and the Dojo supercomputer, Musk appreciated the project's potential to elevate Tesla's capabilities in artificial intelligence and real-world application.

By 2023, the project had progressed significantly, with the neural network analyzing extensive data to refine its driving decisions, aiming for optimal human-like responses. Musk emphasized the importance of measuring the system's success by the distance driven without human interventions, turning it into a quantifiable goal for the team. This approach facilitated continuous improvement, with the team addressing recurring intervention points to enhance the system's autonomy.

A pivotal moment came in April 2023 when Musk tested the neural network planner on a drive through Palo Alto. Accompanied by Shroff and the Autopilot team, this test epitomized the transition towards a more adaptive, learned method of navigating the complexities of real-world driving, marking a significant milestone in Tesla's journey towards fully autonomous vehicles and reasserting its ambition to be at the forefront of AI innovation in transportation.