

# CASE STUDY

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PATENT PROSECUTION

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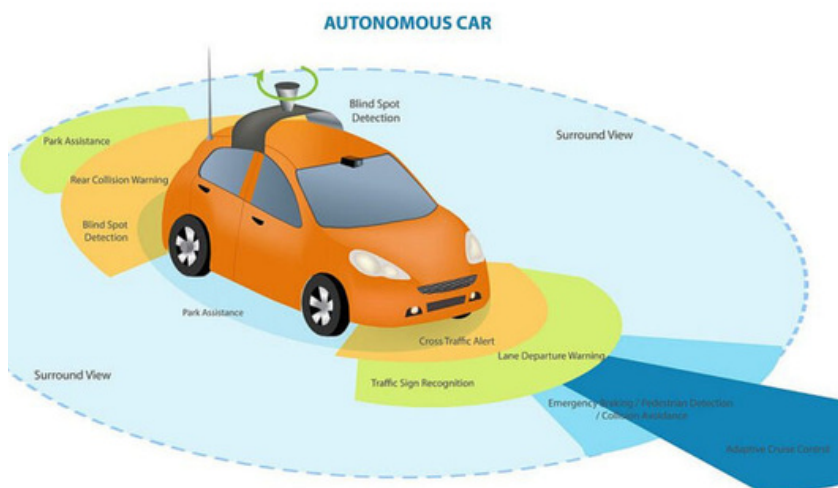


## **LIDAR SENSOR TECHNOLOGY IN AUTONOMOUS VEHICLES**

**PATENT PROSECUTION SUPPORT**

# CHALLENGE

The challenge was to conduct a comprehensive analysis of the global market, project funding, and relevant literature (patents) related to LIDAR technology for autonomous vehicles. This involved gathering extensive data and insights from various sources to provide a detailed overview.



# SOLUTION

Our team employed a multi-step approach that encompassed data acquisition, analysis, and reporting. We began by conceptualizing the scope and objectives of the report, defining the keywords, synonyms, and classes relevant to LIDAR technology in autonomous vehicles.

We utilized patent databases such as Derwent Innovation, Questel Orbit, Google Patents, USPTO, PAJ, Espacenet, and KIPRIS to extract patent-related information. Additionally, non-patent sources like IEEE, Google Scholar, Science Direct, Statista, company websites, and news outlets were used to supplement the data.

The collected data was then subjected to screening and analysis, with a focus on identifying key technologies, trends, top assignees, inventors, and universities in the domain. We also explored regional and geographical filing trends and grant ratios to gain a deeper understanding of the intellectual property landscape.

# RESULT

The analysis yielded several significant insights:

**Market Overview:** The LIDAR market for autonomous vehicles was experiencing substantial growth, with a projected 19.5% increase, reaching a market value of USD 3 billion by 2031. The market had shown consistent growth over the years, with a Y-O-Y growth rate of 26.63%. (Source: Transparency Market Research)

**Technology Implementation:** Various types of LIDAR technologies were being implemented in autonomous vehicles, including mechanical and solid-state LIDAR. Ground-based LIDAR systems were in high demand in the United States.

**Vehicle Growth:** The autonomous vehicle segment was expected to observe approximately 35% growth, with a focus on semi-autonomous vehicles integrating LIDAR technology.

**Regional Analysis:** North America led the market, with the United States being a major contributor. The Asia-Pacific region was also showing significant growth potential, particularly in countries like Japan, Singapore, and China.

**Key Players:** Major players in the LIDAR technology for autonomous vehicles included Waymo, GM Global, and Ford. Other prominent companies like Bosch, Caterpillar, and Baidu were actively involved in the domain.

**Patent Filing Trends:** Patent filing trends indicated a surge in innovation, with the majority of patents being filed post-2012. The highest filing year was 2018, reflecting the technology's increasing relevance.

# CONCLUSION

The analysis provided valuable insights into the LIDAR technology landscape for autonomous vehicles, including market growth, technology trends, regional dynamics, and key players. These findings could be instrumental for stakeholders in the autonomous vehicle industry, guiding their research, development, and strategic decisions in this evolving technology domain.