

CS 846 Software Engineering for Big Data and AI

A Literature Review on AI Ethical or Accident-Related Issues on Autonomous Systems: The Case of Self-Driving Cars

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The project proposes a literature review approach to understand the current discourse around the ethics of self-driving cars. It used a structured and methodical approach to address the multifaceted challenges posed by the integration of AI in autonomous vehicles, while devised a few research questions aiming to investigate the adherence of self-driving cars to ethical standards.

Strengths

- **Multifaceted RQs:** Contains multifaceted research questions covering ethical, liability and privacy dimensions, which are crucial for comprehensive analysis.
- **Structured Methodology:** The use of keywords and specific databases to identify relevant literature is systematic and structured.
- **Comprehensive Search:** The literature review includes recent sources (from 2015 to 2023), which is crucial in a rapidly evolving field like AI; while also used clearly defined inclusion and exclusion criterias for the literature review ensure that the study remains targeted and relevant.

Weaknesses

- **Generalizability:** The applicability of the project's findings to different contexts and legal systems may be limited if it does not account for diversified literatures.
- **Potential Bias:** Possible bias in the selection of literature sources, which may affect the outcomes of the study.
- **Lack of Practical Applications:** May not provide clear guidelines or practical effects for policymakers and engineers in the field, but rather serves just as a study that provides an understanding on AI ethics and autonomous systems.

Suggestions for Potential Improvements

- Include threats to validity, discussing about the limitations of the case study and acknowledging the scope of the research findings.
- Add future research on how future research could be expanded/benefited from this study.
- Include a more rigorous and deeper methodology on how the literature are evaluated and synthesized - for example, a detailed explanation on the paper selection process would be beneficial.
- Expand selection scope of papers to be as broad as possible to ensure that risk of bias is minimized and mitigated.
- Include how other projects would benefit from its findings (eg, how will this impact policy-making, autonomous designs, etc.)