



MORALITY ENGINE: ETHICAL DECISION SIMULATOR

Explore complex moral scenarios with advanced AI in an engaging 3D environment.

GTA VI





BREAKING BOUNDARIES

MEET THE VOICE BEHIND THE PRESENTATION



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| **BREAKING BOUNDARIES** |

MEET THE VOICE BEHIND THE PRESENTATION

Saturday, 25

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MORALITY ENGINE: NAVIGATING ETHICAL DILEMMAS



Morality Engine is an interactive web application that simulates ethical dilemmas in autonomous decision-making systems. It combines cutting-edge ML/AI technologies with an intuitive 3D interface to explore complex moral scenarios through different ethical frameworks.



| ETHICAL DECISION-MAKING |

MORALITY ENGINE OVERVIEW

Exploring Ethical Dilemmas in Autonomous Decision-Making Systems.

FINETUNING OF DISTILGPT2

- 1. Personalized Bias Disrupts a General Consensus: Fine-tuning in morality engines often leads to responses that reflect personalized biases, thereby eliminating a general consensus on ethical decisions.
- 2. Increased Bias from Biased Datasets: Fine-tuning exacerbates the biases inherent in the training dataset, amplifying existing prejudices and stereotypes, which undermines the fairness and objectivity of moral judgments.
- 3. Risk of Overfitting to Contextual Expectations: Fine-tuned morality engines may become overfitted to specific contexts or societal expectations, limiting their ability to handle novel ethical dilemmas and reducing their applicability across diverse moral

CORE ARCHITECTURE

- 1. Master-Slave Hierarchical Algorithm: At the top level, a master agent coordinates interactions between pre-trained agents focused on three ethical judgment windows: utilitarian ethics, deontological ethics, and visual ethics.
- 2. Independent Ethical Logic: Each agent independently applies its logic to generate binary classification responses, which are then processed by the master agent for synthesis.
- 3. Weighted User-Defined Function: The agent responses are translated into a weighted user-defined function to allow a customizable balance between ethical perspectives, processed through a multi-threaded architecture.

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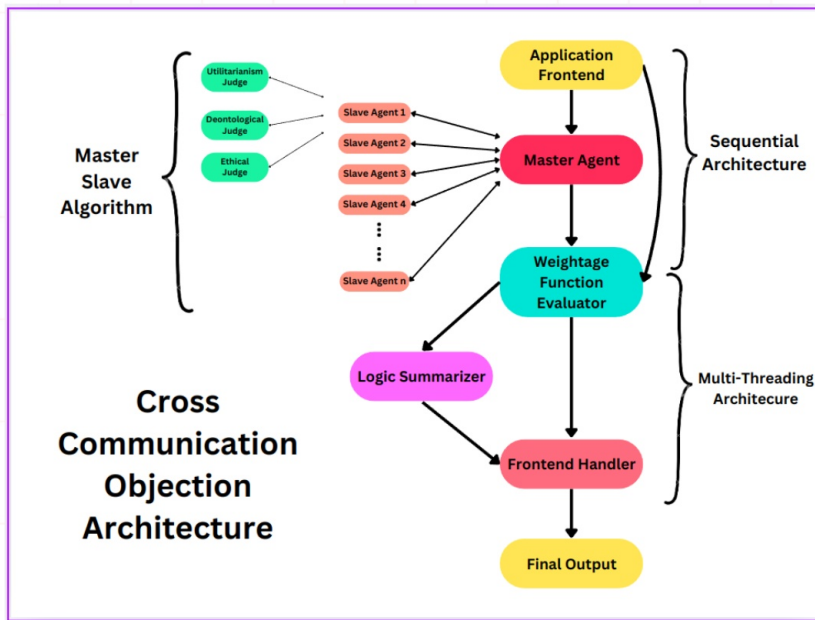
FRONTEND TECHNOLOGIES

The frontend of our application is built using modern frameworks and libraries that enhance user experience and interactivity. React in combination with Vite offers a robust platform for building dynamic user interfaces, while Three.js enables the creation of 3D graphics that can greatly enrich the visual presentation of the application.



CROSS COMMUNICATION OBJECT ARCHITECTURE

A comprehensive overview of cross communication objection architecture



ft-distilgpt2 finetuned; bs-distilgpt2 base;

AVAILABLE SCENARIOS

Understanding the Complex Scenarios in Decision-Making

AUTONOMOUS VEHICLE DECISIONS

In scenarios involving autonomous vehicles, the ethical dilemmas center on making decisions in split seconds with severe consequences. For example, a self-driving car carrying three passengers may malfunction and be forced to choose between crashing into a tree, killing its passengers, or hitting two pedestrians on the road. Similarly, the car might face a choice between hitting a child crossing illegally or an adult walking on the sidewalk. In more complex cases, the car might have to decide whether to crash into a group of five elderly pedestrians or two young adults, weighing the value of life against age and potential future contributions.

MILITARY SECURITY

AI systems pose moral challenges in balancing societal priorities. For instance, an AI responsible for preventing terrorist attacks might have to decide whether to breach individual privacy, potentially saving lives but compromising fundamental rights, or uphold privacy and risk harm to the public. Another dilemma might involve deploying a biased AI in critical situations to ensure safety, knowing its decisions may discriminate against certain groups, or delaying deployment and risking lives while resolving the bias. These scenarios push the boundaries of ethical decision-making in technology, forcing trade-offs between safety, fairness, and moral principles.

MEDICAL ETHICS

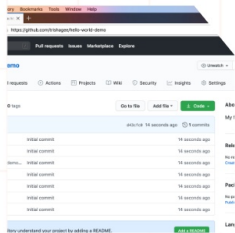
Medical ethics presents equally challenging dilemmas. A surgeon may face the choice of sacrificing one healthy organ donor to save five critically ill patients through transplantation, or letting all five die to preserve the donor's life. Another scenario might involve deciding whether to prioritize a heart transplant for a reformed criminal or an anonymous, morally neutral stranger. Similarly, during childbirth complications, a doctor may be forced to choose between saving the mother or the newborn, knowing the survival of one comes at the cost of the other.

LIFEBOAT SCENARIO

The lifeboat dilemma presents a choice between a pregnant woman, a child, and an elderly man. The pregnant woman represents two lives and future potential but may struggle physically. The child symbolizes hope and requires fewer resources but is less capable of aiding survival. The elderly man, while nearing the end of life, might offer wisdom and leadership. A utilitarian approach could favor saving the pregnant woman and child, while a deontological view argues all lives are equally valuable, making the choice morally complex.

CONTACT

Explore our key resources and documentation



PROJECT LINK : [HTTPS://GITHUB.COM/PRATHAM2403/MORALITYENGINE.GIT](https://github.com/pratham2403/morality-engine.git)

Access the Morality Engine project repository to explore the source code, contribute, or report issues. This link leads to the GitHub page where the project is hosted.

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rage CSI driver

6 Issues 50 Discussions 126 Stars

DOCUMENTATION :
[HTTPS://GITHUB.COM/PRATHAM2403/MORALITYENGINE/LOB/MASTER/README.MD](https://github.com/pratham2403/morality-engine/blob/master/README.md)

Find comprehensive documentation for the Morality Engine, including installation instructions, usage guidelines, and API references. This resource is essential for developers and users to understand how to effectively use the engine.

ACKNOWLEDGMENTS

Recognizing the Essential Support and Innovation



THREE.JS COMMUNITY

The Three.js Community has been instrumental in providing support, resources, and innovative ideas that have enriched the development process. Their dedication to open-source collaboration fosters an environment where creativity thrives, enabling developers to push the boundaries of 3D



REACT TEAM

The React Team has played a crucial role in the evolution of user interface development. Their commitment to creating a robust and flexible library for building user interfaces has empowered countless developers to create dynamic and responsive applications that enhance user



CREWAI CONTRIBUTORS

CrewAI Contributors have significantly advanced the capabilities of AI-driven tools and applications. Their collaborative efforts in refining algorithms and developing features have paved the way for smarter, more efficient solutions that address real-world challenges in various industries.



LANGCHAIN DEVELOPERS

LangChain Developers are at the forefront of building frameworks that enhance language model applications. Their innovation in connecting language models with external data and APIs has opened new avenues for creating intelligent applications that are context-aware and user-centric.