

The Fallacy of AI Functionality

Description

[Tweet](#)

Evaluators should have a basic working knowledge of how to evaluate algorithms used to manage human affairs (law, finance, social services, etc) because algorithm designs embody human decisions and can have large scale consequences. For this reason I recommend:

Raji ID, Kumar IE, Horowitz A, et al. (2022) The Fallacy of AI Functionality. In: *2022 ACM Conference on Fairness, Accountability, and Transparency*, Seoul Republic of Korea, 21 June 2022, pp. 959–972. ACM. DOI: [10.1145/3531146.3533158](https://doi.org/10.1145/3531146.3533158).

Deployed AI systems often do not work. They can be constructed haphazardly, deployed indiscriminately, and promoted deceptively. However, despite this reality, scholars, the press, and policymakers pay too little attention to functionality. This leads to technical and policy solutions focused on “ethical” or value-aligned deployments, often skipping over the prior question of whether a given system functions, or provides any benefits at all. To describe the harms of various types of functionality failures, we analyze a set of case studies to create a taxonomy of known AI functionality issues. We then point to policy and organizational responses that are often overlooked and become more readily available once functionality is drawn into focus. We argue that functionality is a meaningful AI policy challenge, operating as a necessary first step towards protecting affected communities from algorithmic harm.

CONTENTS

1. Introduction
2. Related work
3. The functionality assumption
4. The many dimensions of disfunction
 - 4.1 Methodology
 - 4.2 Failure taxonomy
 - 4.2.1 Impossible Tasks
 - Conceptually Impossible.
 - Practically Impossible
 - 4.2.2 Engineering Failures
 - Model Design Failures
 - Model Implementation Failures
 - Missing Safety Features
 - 4.2.3 Deployment Failures
 - Robustness Issues
 - Failure under Adversarial Attacks
 - Unanticipated Interactions
 - 4.2.4 Communication Failures
 - Falsified or Overstated Capabilities
 - Misrepresented Capabilities
 - 5 DEALING WITH DYSFUNCTION: OPPORTUNITIES FOR INTERVENTION ON FUNCTIONAL

SAFETY

5.1 Legal/Policy Interventions

5.1.1 Consumer Protection

5.1.2 Products Liability Law.

5.1.3 Warranties

5.1.4 Fraud

5.1.5 Other Legal Avenues Already Being Explored

5.2 Organizational interventions

5.2.1 Internal Audits & Documentation.

5.2.2 Product Certification & Standards

5.2.3 Other Interventions

6 CONCLUSION : THE ROAD AHEAD

Category

1. Conferences

Date

09/09/2024

Date Created

12/03/2023

Author

admin