

Poster: Ethics, Values, and Personal Agents

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ABSTRACT

We address the problem of designing privacy-preserving ethical personal agents that understand and act according to their users' preferred values and ethical principles, and provide a satisfying social experience to all their stakeholders.

CCS CONCEPTS

• **Computing methodologies** → **Multi-agent systems; Intelligent agents;**

KEYWORDS

Ethics, Values, Social Norms, Personal Agents

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1 INTRODUCTION

A socially intelligent personal agent (SIPA) acts on behalf of or assists a (human) user in performing daily activities, both mundane and complex. A SIPA understands the social context and helps its user respect the social norms governing the user's interactions in a society [1]. Whereas social norms convey a SIPA to perform or not perform certain actions, values such as security, privacy, pleasure, happiness and recognition, provide a SIPA a reason to pursue or not to pursue those actions [2]. Each action a SIPA executes may promote or demote certain values, both preferred or not preferred by its user. A SIPA that aligns its actions with its user's preferred values and ethical principles can provide a satisfying and privacy-preserving social experience. We propose Ainur, a framework for engineering value-driven, ethical SIPAs. Following Ainur, a SIPA can make value-promoting ethical decisions, especially, in scenarios where the applicable social norms conflict as to what user values to either promote or to demote.

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2 AINUR FRAMEWORK

A SIPA should be aware of its stakeholders, both primary and secondary [1], their goals, and relevant actions to bring about the goals, which may vary under various social contexts, their preferred values, ethical principles and privacy attitudes. In Ainur, a SIPA selects ethically appropriate actions by learning and reasoning about its stakeholders' preferences among their preferred values.

2.1 Interaction in Ainur

A SIPA, first, gains an understanding of the environmental context and current state of the world through its sensors. Second, it determines the future state of the world for each action it could perform. Third, given an understanding of the value preferences of its stakeholders, a SIPA determines the social experience its stakeholders will derive if it performs the selected action. Fourth, based on the applicable norms in a given social context and its stakeholders' goals, a SIPA identifies the action to perform.

2.2 Learning and Reasoning in Ainur

The satisfaction or violation of a social norm could promote or demote certain values for a SIPA's stakeholders. In a given context, the applicable social norms could (1) promote different values that are both preferred and not preferred, or (2) both promote and demote the values preferred by a SIPA's stakeholders. A SIPA in Ainur chooses to satisfy or violate applicable norms by identifying and reasoning about its stakeholders' contextual preferences among values that these norms promote or demote.

3 CONCLUSIONS

We propose Ainur, a framework to engineer ethical SIPAs that can understand and reason about social context, social norms, and values preferred by its stakeholders. We conjecture that an understanding of values each of its action could promote or demote, assists a SIPA in making decisions such that it can provide a value-promoting (or "pleasant") social experience to all its stakeholders.

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