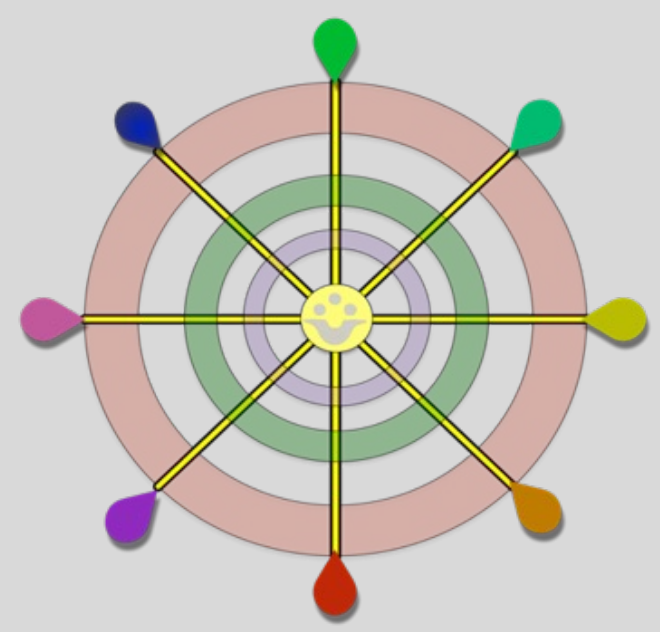
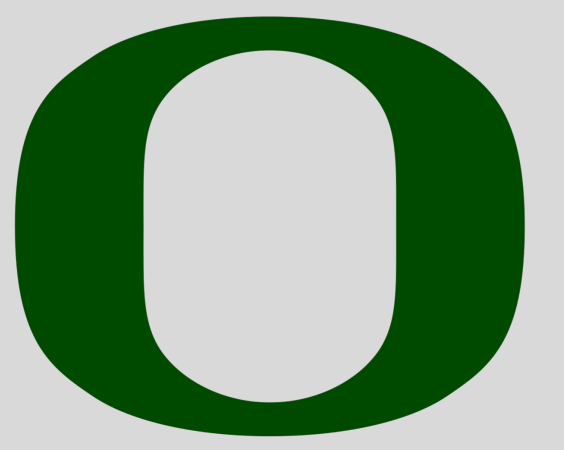




DIGITIZATION OF AN EDUCATIONAL ZEN BUDDHIST BOARD GAME

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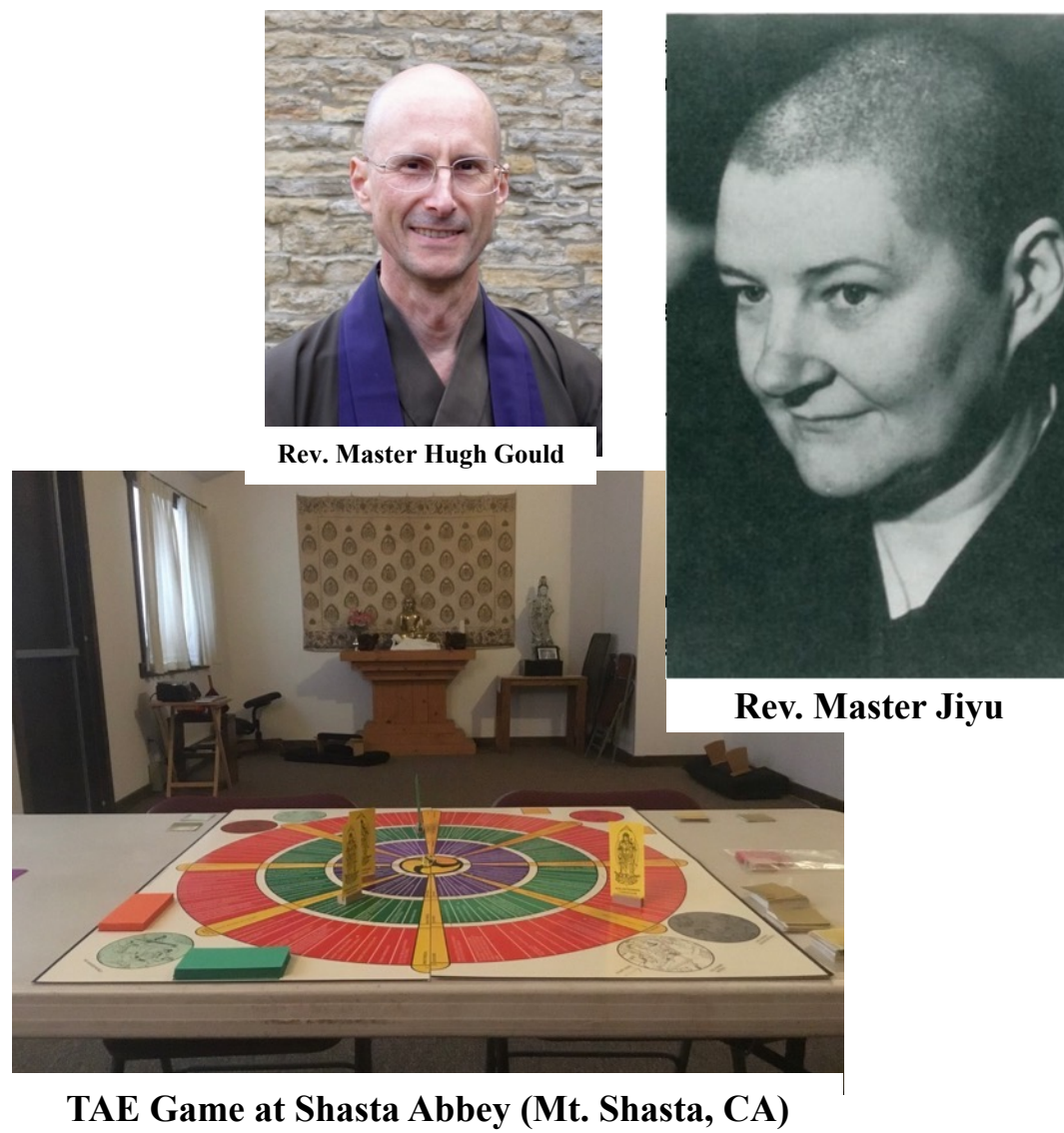


ABSTRACT

The **Training & Enlightenment eGame (TAEeG)** is a digital adaptation of the Training & Enlightenment™ (TAE) board game, which was created by Reverend Master Jiyu-Kennett (1989), founder of the Order of Buddhist Contemplatives (OBC). Approximately 300 games were manufactured and distributed by the OBC in the 1980s and continue to be used in Buddhist temples across the U.S., U.K., Canada, and Europe. The present project aims to preserve this educational tool and extend its reach to future generations. It uses the Tkinter library to create a **Python-based game board system** with a graphical user interface (GUI), algorithmic coding, and error handling during code execution. SQLite is used for data storage and retrieval. To the best of our knowledge, *TAEeG is the first computer game that is designed to support Zen Buddhist training and practice.*

TRAINING & ENLIGHTENMENT (TAE) BOARD GAME

- Game Board + 9-sided die (*right*)
- Avatar Markers (Upright cards)
 - Ranks 1-2: Upside-Down/Right side-Up Animals
 - Pig (Greed or “**Attachment**”)
 - Snake (Anger or “**Aversion**”)
 - Rooster (Ignorance or “**Delusion**”)
 - Ranks 3-5: Bodhisattvas
 - Avalokitesvara (mind of **compassion**)
 - Samantabhadra (mind of **love**)
 - Manjusri (mind of **wisdom**)
 - Rank 6: Buddha (fully enlightened being)
- Karma** (**orange**) Cards
- Bodhisattva** (**green**) Cards
- Gold Reward Cards (**Merit Points**)

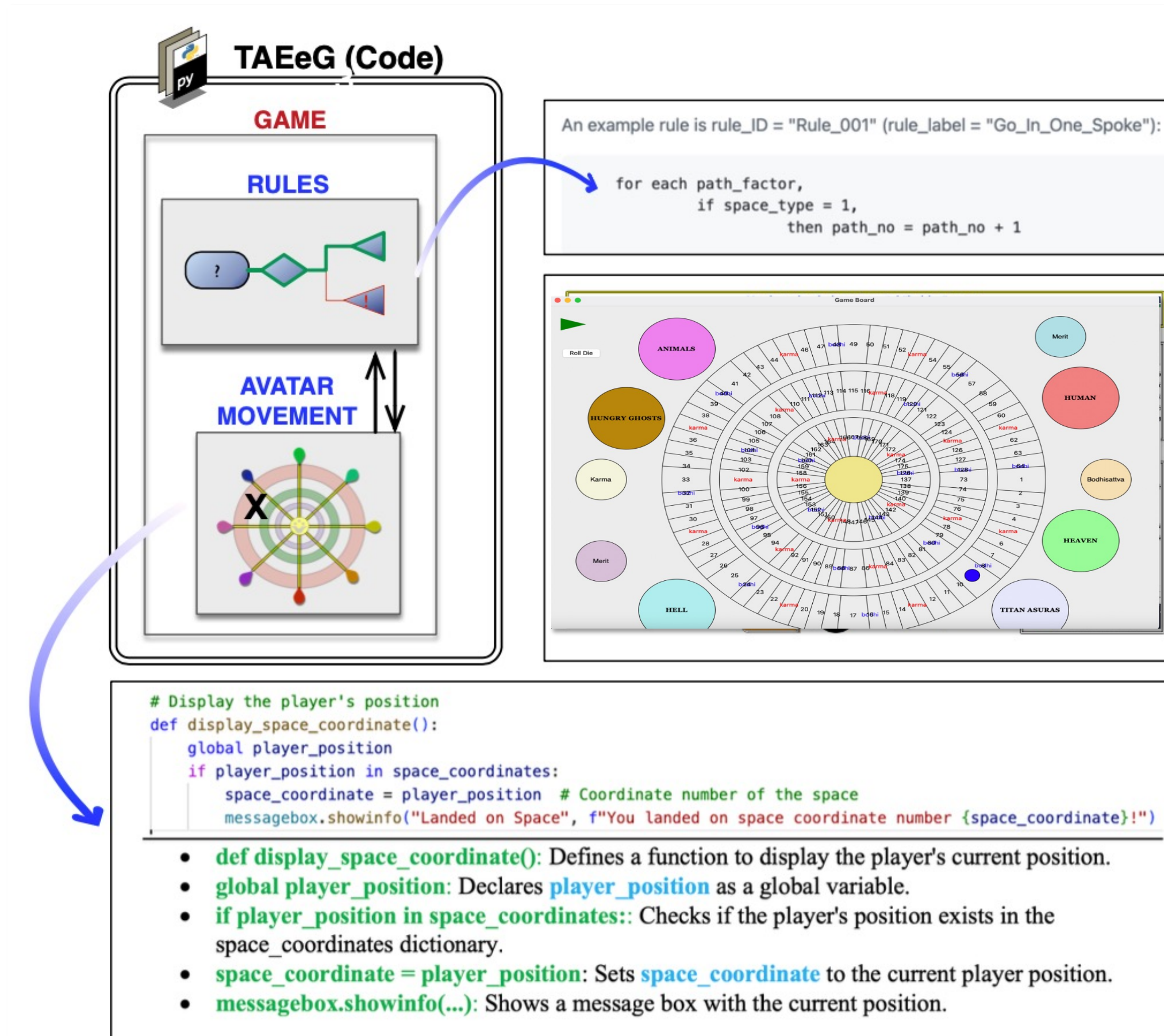


TAE Game at Shasta Abbey (Mt. Shasta, CA)

METHODS

Software Design and Implementation

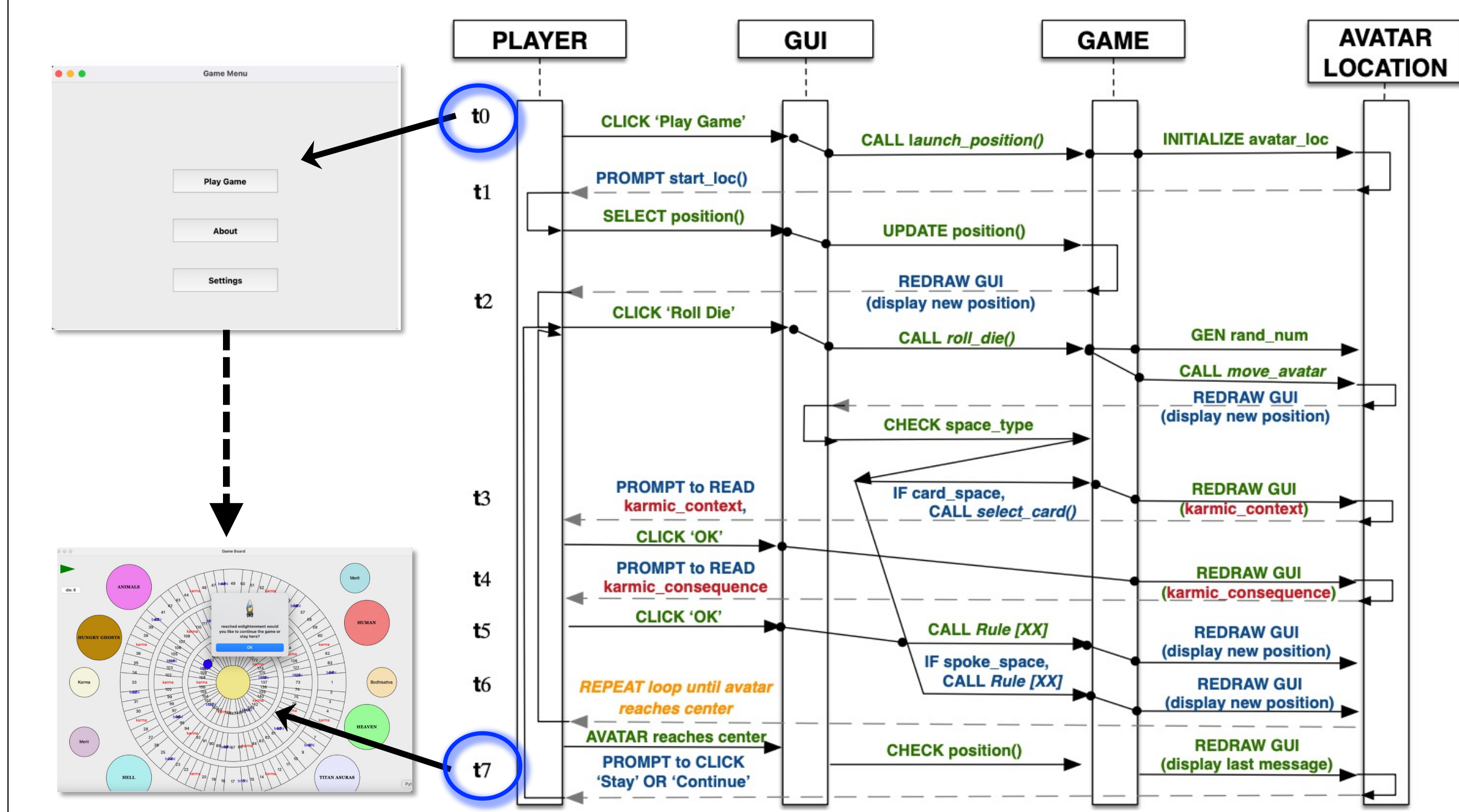
- Digital Game Contents**
 - Data & Knowledge Capture by “Domain Expert”
 - Semi-structured (tabular) source data
- Digital Game Structure**
 - Code Modules (GUI, GAME, DATABASE)
- Graphical User Interface (GUI) Display**
 - Main Game Interface
 - Main Menu (pop-up)



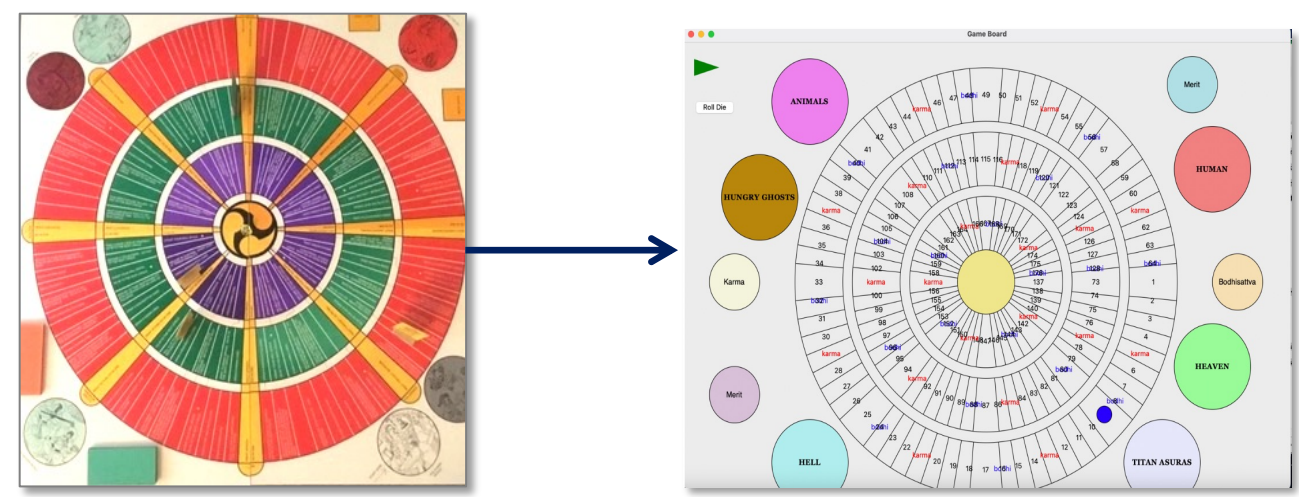
RESULTS

TAEeG Version 1.0 Software Specifications

- Coded w/ Python + libraries (Tkinter, Pandas, SQLite)
- Open-source code (subject to OBC licensing & copyright)
- Versioning and management of code via GitHub
- Partial implementation of the original TAE game
 - Single Player
 - Limited Storage and Tracking of Data (No avatar ranks, No Merit Points, Subset of Karmic Narratives)



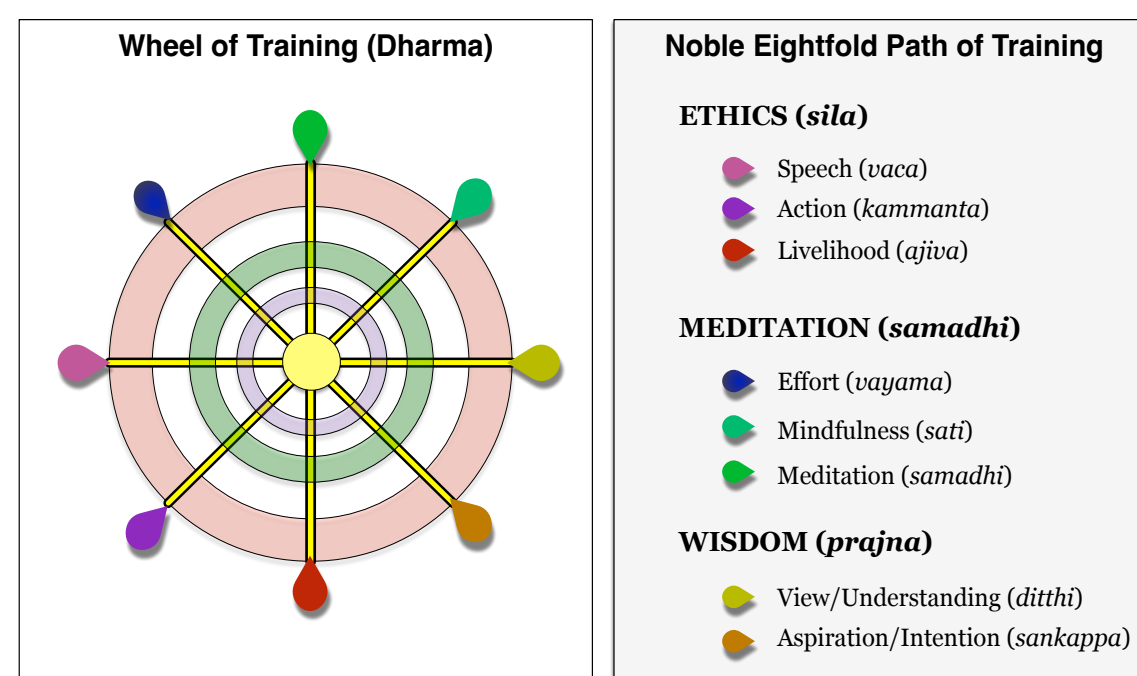
TAE E-GAME (TAEeG) PROJECT AIMS



- Python** programming to create partial digitization of TAE Board Game, following two main software design principles (Carvahlo, et al., 2015):
 - Fidelity to original TAE game*
 - Effective Graphical User Interface (GUI)*

- Gamification of Learning** in Zen Buddhist Training:

- Ethics** (Skt. *Sila*)
 - Reflecting on *karmic narratives*
 - Applying knowledge of *Buddhist precepts*
- Meditation** (Skt. *Samadhi*)
 - Sitting still: skillful response to karmic challenges
 - Bringing Mind of meditation (*bodhisattva attitude*) to game play
- Wisdom** (Skt. *Prajna*)
 - “*Transferring merit*” to help other players
 - Viewing “good”/“bad” events as learning opportunities



ETHICAL (KARMIC) NARRATIVES

Table 1. Sample Karmic Narratives, illustrating “good” (skillful) and “bad” (unskillful) actions of Body, Speech, & Mind (Jiyu-Kennett, 1989). See “Comment” for associated Precept (ethical principle).

Karmic Context	Karmic Action (<i>Karma</i>)	Karmic Consequence (<i>Vipaka</i>)	Comment (Type of Karma)
You're at a party.	You drink too much and become intoxicated.	Lose one turn.	Action of <i>Body</i> (-) (Great Precept #5)
You're on the telephone.	You participate in gossip.	Lose two turns.	Action of <i>Speech</i> (-) (Great Precept #6)
Your name is misspelled.	You get very angry.	Go to Hell.	Action of <i>Mind</i> (-) (Pure Precept #2)
You remove your shoes.	You put your shoes straight.	Increase your Avatar Rank.	Action of <i>Body</i> (+) (Great Precept #4)
You steal an apple.	You admit what you have done.	Go in to the next Circle.	Action of <i>Speech</i> (+) (Great Precept #4)
Your boss criticizes you.	You remind yourself that your boss has positive qualities.	Go to the Center.	Action of <i>Mind</i> (+) (Great Precept #2)

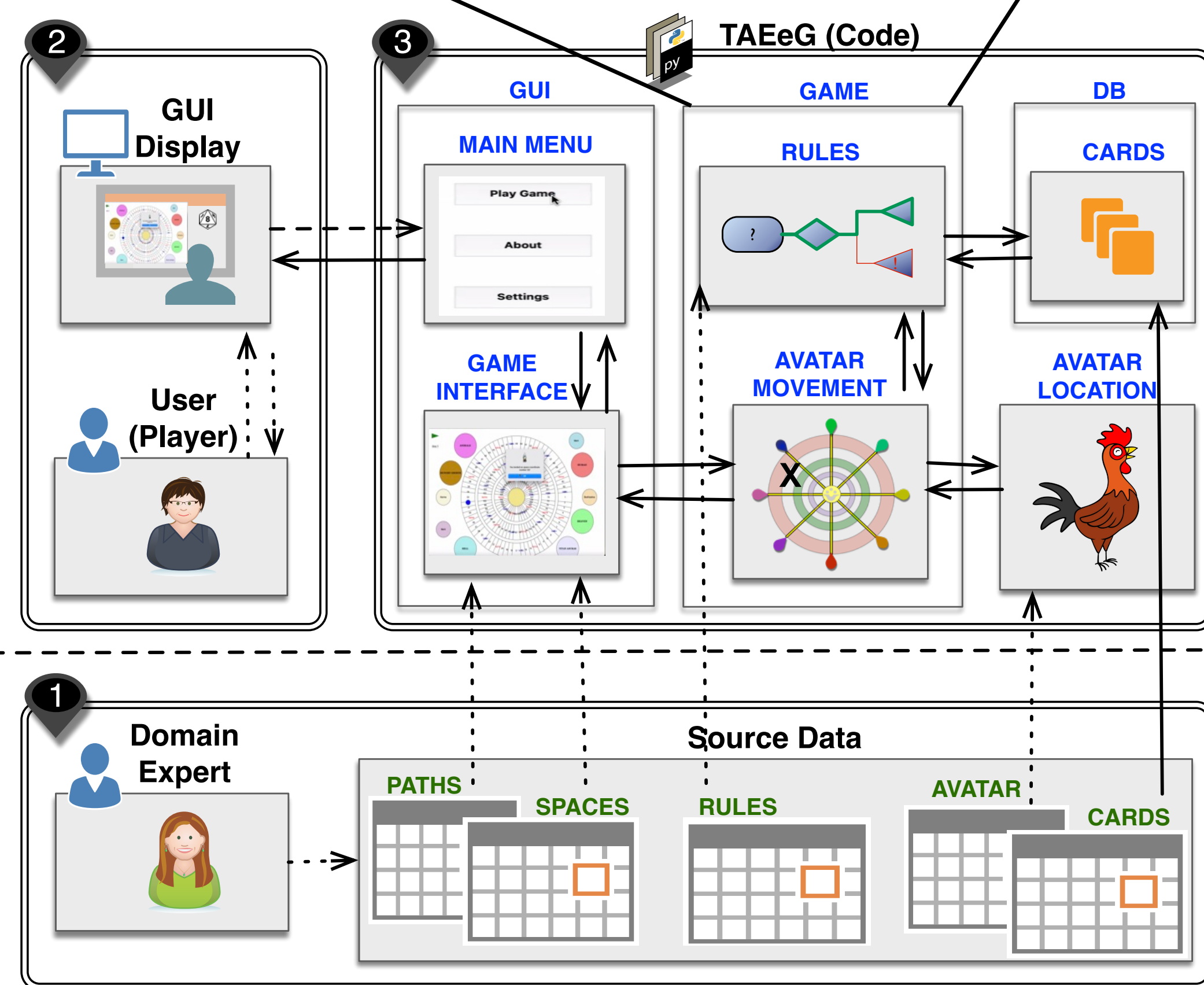
Table 2. Zen Buddhist (“Bodhisattva”) Precepts

PreceptLabel	PreceptSummary	Description
Refuge01	buddha_refuge	I have faith in the Buddha.
Refuge02	dharma_refuge	I aspire to understand the Teachings.
Refuge03	sangha_refuge	I trust the community of practitioners.
PurePrecept01	cease_from_evil	I intend to cease from evil.
PurePrecept02	do_only_good	I intend to do only good.
PurePrecept03	do_good_for_others	I intend to do good for others so that my actions will not cause them to do wrong.
GreatPrecept01	do_not_kill	I intend to train myself not to kill.
GreatPrecept02	do_not_steal	I intend to train myself not to steal.
GreatPrecept03	do_not_covet	I intend to train myself not to covet.
GreatPrecept04	do_not_lie	I intend to train myself not to lie.
GreatPrecept05	do_not_drugs	I intend to train myself not to get drunk or to delude myself with drugs or ideas.
GreatPrecept06	do_not_gossip	I intend to train myself not to speak against others.
GreatPrecept07	do_not_be_proud	I intend to train myself not to be proud of myself and devalue others.
GreatPrecept08	do_not_be stingy	I intend to train myself not to be mean in giving either help or wealth.
GreatPrecept09	do_not_be_angry	I intend to train myself not to be angry.
GreatPrecept10	do_not_blame	I intend to train myself not to defame (or blame) the Buddha, Dharma, or Sangha.

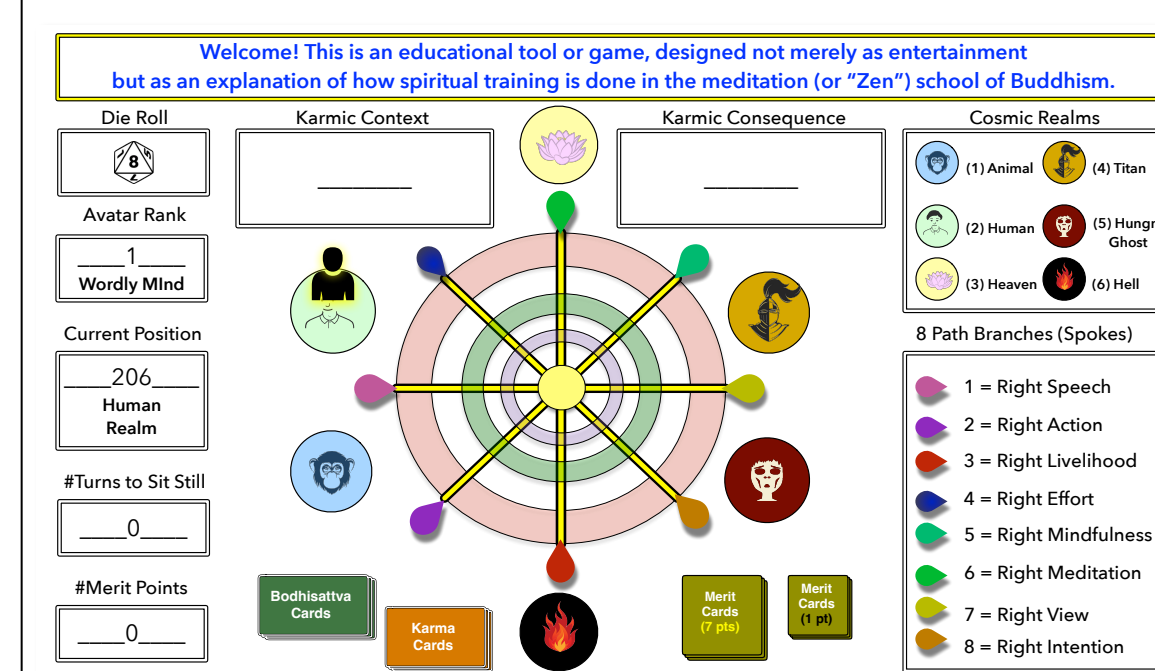
RULES FOR MEDITATION

- Game-based scenarios that prompt player to sit still (meditate)**

- Die Roll = ‘0’ → No movement, no card draws on that turn
- Missed Turns → Karmic consequence for some unskillful actions (karma)
- Grasp-the-Will** Spaces → Player chooses to skip 3 turns or to continue playing. Reward for skipping 3 turns is increased avatar rank, movement inwards toward center (*nirvana*)



FUTURE DIRECTIONS

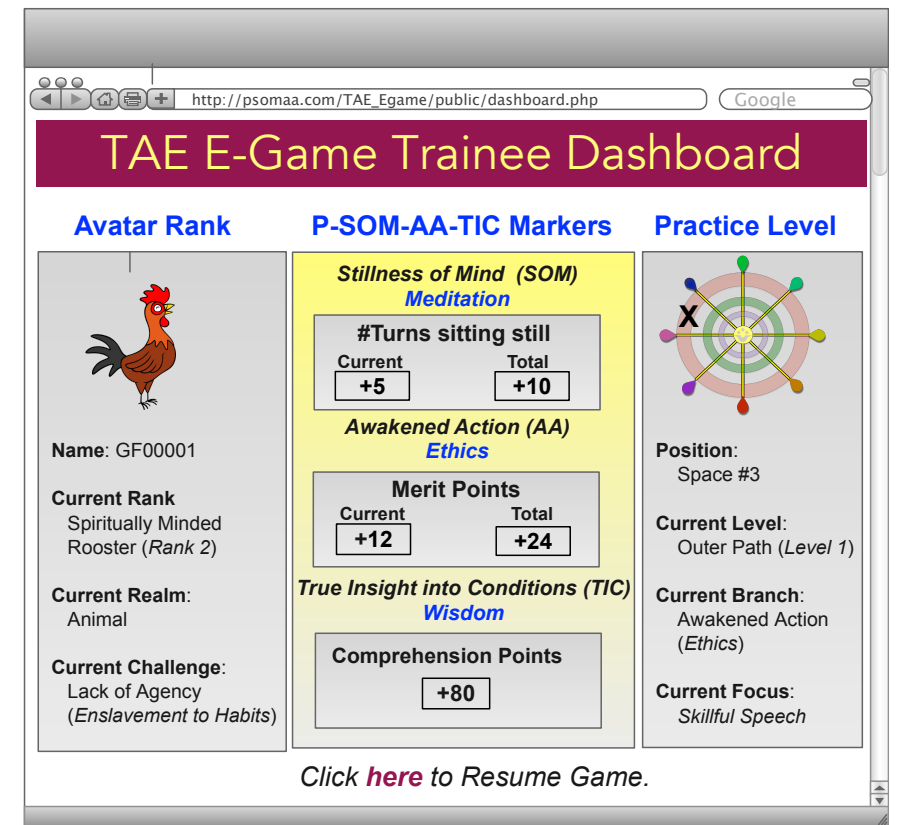


Version 1.5: Full-Featured, Single Player Version

- SQL Database to store and track changes in key variables, user responses
- Updated GUI to reflect dynamic changes in key variables

Version 2.0: Multi-Player Version w/ Advanced Features

- Dashboard to display game play and learning metrics
- Personalization of narratives
- Web-based links to external resources (e.g., Sutta Central)
- Intelligent & adaptive features (e.g., real-time feedback, scaffolding of learning)



References

- Jiyu-Kennett, P.T.N.H. (1989) *Training and Enlightenment: A Buddhist Game and Educational Tool for Adults and Older Children...* Copyright © 1989. All Rights Reserved. Printed in the United States of America.
- Carvalho, M. B., Bellotti, F., Berta, R., De Gloria, A., Sedano, C. I., Hauge, J. B., ... & Rauterberg, M. (2015). An activity theory-based model for serious games analysis and conceptual design. *Computers & Education*, 87, 166-181

Acknowledgments



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