

FOR OFFICE USE ONLY

DATE RECEIVED: **11/22/2024**

DATE APPROVED: **01/02/2025**

FILE NUMBER: **#25-002**

APPLICATION FOR STATISTICAL CONSULTING

LAST NAME: **Zhang**

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DEPARTMENT (full name): **Computer Graphic Technology**

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YOUR PRIMARY POSITION AT PURDUE: **Master's Student**

Other:

(if a student) MAJOR PROFESSOR LAST NAME: **Giri**

FIRST NAME: **Nandhini**

PHONE NUMBER: **7654944446**

MAJOR PROFESSOR CAMPUS ADDRESS (BLDG & DEPT): **Computer Graphic Technology / KNOY**

MAJOR PROFESSOR EMAIL: **girin@purdue.edu**

HOW DID YOU FIND US: **Recommendation of my advisor or committee member**

LIST STATISTICS COURSES TAKEN AND STATISTICAL COMPUTING EXPERIENCE: **I have took STAT 50100 Experimental Stat I.**

STAGE OF RESEARCH: **Design (no data collected yet)**

IF DESIGN STAGE IS COMPLETE, WAS A STATISTICIAN CONSULTED FOR DESIGN?

PREVIOUS CONSULTANT – INSTITUTION/DEPARTMENT:

ESTIMATED NUMBER OF CONSULTING HOURS NEEDED THIS SEMESTER: **<5 hours**

EXPECTED COMPLETION DATE OF PROJECT: **10/1/2025**

IMPORTANT DEADLINE OR DUE DATES RELATED TO YOUR PROJECT:

THE RESULTS OF THIS RESEARCH WILL PROBABLY BE PUBLISHED AS:

M.S. Thesis

IS THIS RESEARCH SUPPORTED BY A GRANT OR CONTRACT? **No**

If so, give grant/contract title:

GIVE A BRIEF DESCRIPTION OF YOUR RESEARCH INCLUDING:

PURPOSE:

Investigate how combining mandala creation with loving-kindness meditation(LKM) affects user engagement.

Evaluate effectiveness of cultural integration in digital meditation experiences.

DESCRIPTION OF VARIABLES TO BE MEASURED:

Independent Variables:

Meditation type (traditional LKM vs integrated mandala-LKM)

Time (pre vs post intervention)

Dependent Variables:

Mindfulness scores (FFMQ)

Self-compassion scores (SCS-SF)

Qualitative feedback

Experiment Details:

A sample of 20-30 participants, representing a diverse range of meditation experience levels, will be recruited for user testing. The testing will be conducted in two rounds:

Round 1:

- Participants complete pre-test questionnaires (demographics, FFMQ, SCS-SF)
- Participants engage in guided Loving-Kindness Meditation (without Mandala practices)
- Post-session questionnaires (FFMQ, SCS-SF)

Round 2:

- Participants use the developed application integrating Mandala practices with LKM
 - Post-session questionnaires (FFMQ, SCS-SF)
 - Brief qualitative feedback on the experience
- Measures:
1. Five Facet Mindfulness Questionnaire (FFMQ): A 39-item scale assessing five facets of mindfulness.
 2. Self-Compassion Scale - Short Form (SCS-SF): A 12-item scale measuring six components of self-compassion.
 3. Qualitative feedback: Open-ended questions about the user experience with the application.

RESEARCH QUESTIONS THAT YOU WANT TO ADDRESS USING STATISTICAL METHODS:

1. Does mandala integration significantly improve mindfulness scores compared to traditional LKM?
2. Are there significant differences in self-compassion scores between traditional and integrated approaches?
3. Do the integrated meditation is more engaging than the traditional?

STATISTICAL ISSUES:

Sample size calculation: Is $n=20-30$ sufficient for detecting meaningful differences?

How to handle ordinal data from scales?

Most appropriate test for comparing pre/post scores between conditions?

ADDITIONAL INFORMATION YOU THINK WOULD BE HELPFUL:

ATTACHMENTS:

Attachment in Clients Folder