Research Development Fund – Fall 2022 Application

Application Title: AI-based Mental/Emotional Well-being of Faculty/Staff/Students at Texas A&M

Lead contact for RDF Application:
     Name: Dr. Ben Zoghi
     Department: Engineering Technology and Industrial Distribution
     Email address: zoghi@tamu.edu
     Phone number: 979-676-3533

Key Participating Units: Dr. Daniel Hajovsky (School Psychology, Educational Psychology), Dr. Bradley Johnston (Director, and Co-founder of NutriRECS, Departments of Nutrition & Statistics)

RDF Amount Requested ($): $1,031,568.00

Executive Summary

Scope: Improving performance, enhance workplace relationships and enable positive culture change spans a wide spectrum of subjects. Several organizations/departments at TAMU have worked to engage participants in focused professional development and provide opportunities to transfer to actional real-life strategies. In this research, the following topics are considered: 1) promote psychological safety, diversity, equity, and inclusion (DEI) in the university, 2) measure and evaluate stress and health data to help individuals monitor and review the stress management plan, 3) qualitative and quantitative data collection and analysis integrated with machine learning algorithms.

Objective: The goal is to improve mental/emotional well-being of faculty/staff/students in the aspect of cultural competency, health, and self-stress-awareness, investigate how AI technology can amplify current practices to improve individual, team, and organizational performance and investigate the positive impact of cultural competence across Texas A&M by devising the dashboard and application embedded with new framework at the intersection of artificial intelligence, machine learning, and social science using innovative techniques.

Research gains: The scope and objective above indicate interdisciplinary collaborations by a team of investigators from several organizations and colleges at TAMU such as College of Engineering, College of Agriculture and Life Sciences, College of Arts and Sciences**,** Office of Inclusive Excellence (School of Education & Human Development), Academic Professional Track (Faculty Affairs), Progressive Leadership Development (Division of Human Resources and Organizational Effectiveness), Cultural Awareness and Diversity Expansion Team (Maroon Link), Psychological & Brain Sciences, Public Health, etc. The proposed research will be utilized to enhance the work and educational environment. The team planned to develop and integrate machine learning as part of the individual Growth Index for stress assessments and track the improvement of cultural competency.

Research infrastructure enhancement: The research is about social study to enhance personal development that can be applied in multiple disciplines. The missions involve social science, machine-learning, massive computation, and data analysis. Advances in each of these areas will enhance the TAMU research community. The practical advances may translate to efficiencies and abilities improvement in human development research programs.

Units to benefit: The proposed groups, organizations, and colleges listed above will benefit by the psychological safety development, and stress management. The application phase of the research would benefit any individual on campus and help students prepare for their career stage.

Enhancement of external funding: The research project will allow the team to collect quantitative and qualitative data with a machines-oriented, modeling and analyzing system to enhance cultural competency development and stress management, which can further enable TAMU groups, organizations, and colleges to apply funding from NSF, NIH, nonprofits, and industry.

Expected Outcomes: 1) Improve the individual ability of faculty, staff, and student to interact effectively in cross-culture situation. 2) Scientific measurement and monitor the stress level and build resistance to stress.