

Machine Learning in Motion

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Student Researchers: Machine Learning in Motion VIP Team

The MLM team uses machine learning to build a system that detects humans, shapes, and motion in 3D space, with the objective to create an interface that all can use in the realm of interactive performance. The MLM team embarked on this research project in the spring 2023 semester. This team will work with Purdue Division of Dance DANC 351 students to develop and test this new technology in the 2024 spring semester. The team works with low-cost, commonly available technology and equipment so anyone can reconstruct and use the system once it is developed.

This interdisciplinary project will become another source for people to learn about how technology can be used to help artists in many different disciplines use the physical world to influence the electrical and hardware realm. Allowing them to use this system in their installations and live performances throughout their careers. As the project progresses, the team will work alongside artists to explore the different ways that the software and hardware could be used in order to make smart and more efficient development choices.

The team will create an interactive installation for the Boiler Gold Rush 2024 Entertainment Challenge for all BGR students to explore while they become part of the art. We will track the motion of students with our developing system and project their movement onto the walls of the space they inhabit with moving images and sounds. Our system will respond and amplify the changes of the BGR students' movements. The BGR 2024 Entertainment Challenge will be a wonderful opportunity for the MLM VIP team to test their system and share it with the public, taking them one step closer to completing a system for artists to utilize within their creative research.

Machine Learning in Motion BGR 2024 Entertainment Challenge Budget

Equipment

HD Ultra-Short Throw Projector	1500.00
4 Camera Tripods	320.00
6 HD Webcams	360.00
2 HP Laptop Computers	720.00
Total	2900.00