Determining Physics Law From Moving Object

Department of Electrical & Computer Engineering

North South University
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Cse499A - SENIOR DESIGN I
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APPROVAL

The entitled **"Determining Physics Law using Deep Neural Network"** by Sharara Sartaj (1620169042) and Sanzar Rahman (1621555042 is approved in partial fulfillment of the requirement of the Degree of Bachelor of Science in Computer Science and Engineering on May and has been accepted as satisfactory.

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DECLARATION

This is our truthful declaration that the **"499B SENIOR DESIGN PROJECT II"** we have prepared is not a copy of any **"499B SENIOR DESIGN PROJECT II"** previously made by any other team. We also express our honest confirmation in support of the fact that the said **"499B SENIOR DESIGN PROJECT II"** has neither been used before to fulfill any other course related purpose nor it will be submitted to any other team or authority in future.

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ACKNOWLEDGMENT

First of all, we would like to convey to the Almighty our appreciation for giving us the strength and opportunity to fulfill our duties and complete the report.

This Project connected the links between theoretical understanding and the experience of real life. Via theoretical comprehension, this report will have realistic experience.

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Abstract

Computer vision is an interdisciplinary scientific field in Deep Learning that deals with how visual images or videos can help computers achieve high-level understanding. It attempts to understand and automate tasks that the human visual system can do from the perspective of engineering. The soul of Computer Vision is Detection and for our Project we are trying to determine any physics law from a moving object using Deep Learning algorithms and techniques . As the initial step we have trained our Deep Learning Model to detect a sports ball from a picture and also from video. The accuracy we got was quite good but now we are trying to track the ball in continuous time frame without dropping it for a second. Our next steps will be getting the coordinate values of that ball from a video and then using those values we will try to compare it with curves that any law of physics follow which is the main goal of this Project.