



SEMESTER PROJECT - ABSTRACT FORM

Batch: 2073 (6th)

Semester: Seventh (7th)

Year: 2076

S.No.	TU Exam Roll No	Student Name
1	10526/073	Biswas Poudyal
2	10691/073	Krishna Khanal
3	10713/073	Sameer Kattel

Project Title: MNIST based HandWritten Digit Recognition from Scratch

Front-end Tool: Jupyter Notebook (Notebook Based Output)

Back-end Tool: PyCharm

Group/Team Leader: Sameer Kattel

ABSTRACT:

HandWritten Digit Recognition has been a topic of research in the field of OCR since 1998, first performed by LeCun using MNIST dataset with 12% of error rate. Since then a large number of researchers have worked on the problem using different approaches, being able to achieve an astonishing state of art performance.

Our team wishes to follow the footsteps and implement a Deep Neural Network Architecture to recognize the handwritten digits using the same MNIST dataset. Unlike the trend, we, however, intend to implement our model from scratch. This would enable us to better tune the model using different optimization techniques. On completion of the project, we believe we would be able to create a simple but efficient library that could be used to implement some of the well-known algorithms and optimizers used in the Deep Learning Community, including but not limited to Back Propagation, Mini-batch Gradient Descent and Adam Optimizer. Besides, it will also ignite a better understanding of the Deep Learning Arena among us which definitely fulfills the objective of this project in our curriculum and would prove a lot more beneficial in our future work.

Recommended Supervisor:

1. Bijaya Mishra
2. Dhiraj Kumar Jha

Group/Team Leader Signature

.....