8.1 Appendix A.1

8.1.1 IDEA Matrix

Table 8.1: IDEA Matrix

I	D	E	A
Innovative	Detect	Evaluate	Associate
Increase	Decrease	Effective	Acquire
Investment	Depict	Enhance	Analyse

Innovative	Up till now, DDoS detection systems uses a single mechanism for its working. Here, the system will be using two mechanisms i.e. support vector machine and entropy based discretization simultaneously which is **innovative**.
Increase	As the system will be using support vector machine and entropy based discretization, efficiency of the system will **increase**.
Investment	As the system contains Software components only. So, **zero investment** is required to implement the system in already deployed software defined network.

Detect	The system will **detect** DDoS attack and raise notification to the network administrator team.
Decrease	The DDoS detection algorithm will **decrease** the possibility of false positive attack detection.
Depict	The system will **depict** appropriately whether the network traffic is normal or attack traffic.

Evaluate	An important part of the implementation is the **evaluation** of the rate of flow of packets per unit time.
Effective	The system analyses the traffic and detects the attack at runtime thus, increasing the **effectiveness**.
Enhance	The accuracy of the system will be **enhanced** by using an environment - specific training dataset for SVM.

Associate	The project is a step towards **association** and integration of next generation networking with advanced computing concepts like Machine Learning and Data Mining.
Acquire	The flow table containing the flow entries along with the information of the count of the packets is **acquired** from the SDN switches.
Analyse	The system will **analyse** the data acquired from the switches to perform the intended task of detecting the DDoS attack.