

## LIST OF FIGURES

<b><u>Figure No.</u></b>	<b><u>Name of the Figure</u></b>	<b><u>Page No.</u></b>
Figure 1.1	Intrusion Detection Systems	2
Figure 1.2	Example of Anomalies	3
Figure 1.3	Machine Learning System	5
Figure 1.4	Supervised Learning Model	6
Figure 1.5	Unsupervised Learning Model	7
Figure 1.6	Reinforcement Learning Model	7
Figure 1.7	Taxonomy of Anomaly Based IDS	8
Figure 2.1	Markov Chain Illustration	13
Figure 2.2	Trellis Graph Representation of a HMM	13
Figure 2.3	Experimental Results for TCP	20
Figure 2.4	Comparison of Classification Results of various BN's on full dataset and Wenke Lee	20
Figure 3.1	TCP Packet Format	24
Figure 4.1	Overall System Design	27
Figure 4.2	Use Case Diagram	29
Figure 4.3	Data Flow Diagram	30
Figure 4.4	State Diagram	31
Figure 7.1	Home Page	44
Figure 7.2	Testing Page	44
Figure 7.3	DARPA No Attack Results	45
Figure 7.4	DARPA Attack Results	45
Figure 7.5	KDD No Attack Results	46
Figure 7.6	KDD Attack Results	46
Figure 7.7	Auckland No Attack Results	47
Figure 7.8	Auckland Attack Results	47
Figure A.1	Performance Matrix for AUCK-II	54
Figure A.2	Performance Matrix for DARPA	54
Figure A.3	Experiments to Determine t (DARPA)	56
Figure A.4	Experiments to Determine t (AUCK-II)	56