

Appendix 1: Determining the severity of kidney injury

Status Description	Kidney injury severity level
$(Cr7 - Cr < 0.3 \text{ and } Cr1 - Cr < 0.3)$ or $(Cr7/Cr < 1.5 \text{ and } Cr1/Cr < 1.5)$	No injury
$(Cr1 - Cr = 0.3 \text{ or } Cr7 - Cr = 0.3)$ or $(1.5 < Cr1/Cr < 1.9 \text{ or } 1.5 < Cr7/Cr < 1.9)$	Stage 1
$2 < Cr1/Cr < 2.9 \text{ or } 2 < Cr7/Cr < 2.9$	Stage 2
$(Cr1 - Cr > 4 \text{ or } Cr7 - Cr > 4)$ or $(Cr/Cr > 3 \text{ or } Cr7 /Cr > 3)$	Stage 3

Appendix 2: Neural network parameters designed for AKI- regressor

Layer (type)	Output Shape	#Param	Activation
dense (Dense)	(None, 14)	126	RELU
dense_1 (Dense)	(None, 8)	120	RELU
dense_2 (Dense)	(None, 6)	54	Sigmoid

Appendix 3: Error rate for AKI- Planner, AKI+ Planner on AKI-, AKI+ dataset

	AKI- Test samples	AKI+ Test samples	AKI- Train samples	AKI+ Train samples
RMSE	0.0906	0.0887	0.1074	0.1067

Appendix 4: Confusion Matrix for neural network evaluation on train data

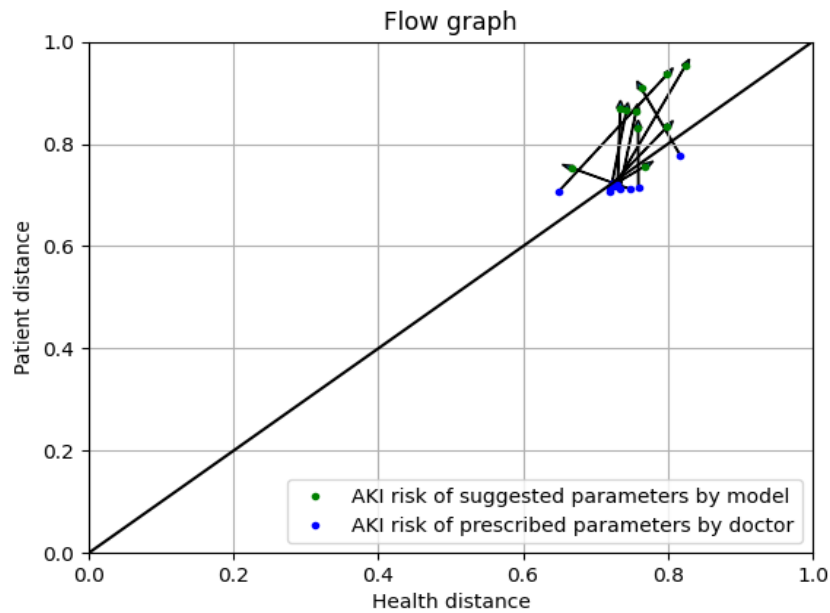
	Real Labels	
Predicted Labels	Positive	Negative
Positive	True Positive (TP) 351 samples (41.39%)	False Positive (FP) 84 samples (9.91%)
Negative	False Negative (FN) 96 samples (11.32%)	True Negative 317 samples (31.38%)

Appendix 5: Confusion Matrix for neural network evaluation on test data

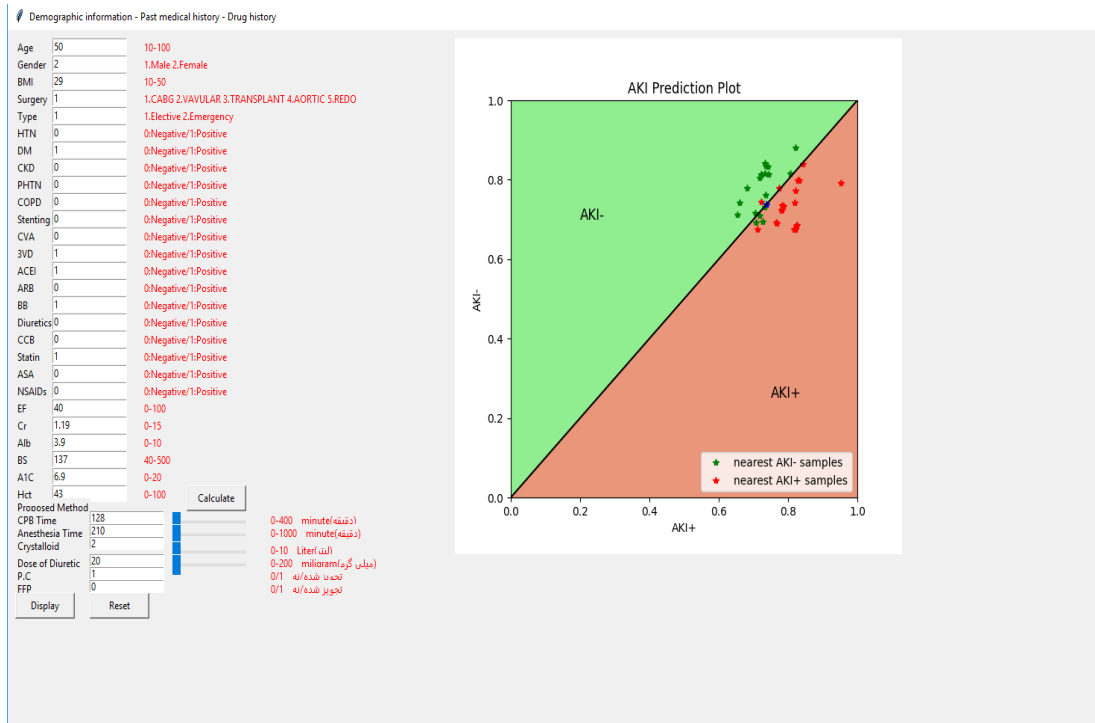
	Real Labels	
Predicted Labels	Positive	Negative
Positive	True Positive (TP) 67 samples (44.67%)	False Positive (FP) 17 samples (11.33%)
Negative	False Negative (FN) 12 samples (8.00%)	True Negative 54 samples (36.00%)

Appendix 6: Confusion Matrix for survey result

	Real Labels	
Predicted Labels	Positive	Negative
Positive	True Positive (TP) 9 samples (15.00%)	False Positive (FP) 3 samples (5.00%)
Negative	False Negative (FN) 21 samples (35%)	True Negative 27 samples (45%)



Appendix 7: The flow graph indicating movement of points in the space.



Appendix 8: The simulator software for evaluating AKI risk of anesthesia parameters.