

Aggregation and Missingness Percentages of Vital Sign Data Obtained from MIMIC-III - Used as Timeseries to Predict Outcome for CKD and Pneumonia. Also included are the Aggregation Used to Process Vitals Obtained from King's College Hospital in the COVID-19 Study

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I Dynamic Variables Used in the COVID-19 Use Case

Variable	Missingness Rate	Aggregation Function
Albumin	6.16%	min
Creatinine	6.26%	max
C-Reactive Protein	7%	max
Diastolic Blood Pressure	13.99%	min,max
Inspired Fraction of Oxygen (FiO2)	13.66%	min, max
Haemoglobin	5.95%	min
Lymphocyte Count	6.1%	mean
Neutrophil Count	6.1%	mean
NEWS2	13.99%	mean
Platelet Count	5.93%	mean
PO2/FiO2	14.65%	min,max
Systolic Blood Pressure	13.99%	min,max
Urea	6.19%	max
White Blood Cell Count	6.12%	min/max

Table S-1: .

II Dynamic Variables Used in the Pneumonia and CKD Use Cases

Variable	Pneumonia Missingness Rate	CKD Missingness Rate	Aggregation Function	
Alanine Aminotransferase (ALT)	10.49%	4.02%	max	
Assured shorthold tenancies(AST)	11.44%	4.02%	max	
Albumin	14.94%	11.02 %	min	
Bilirubin	10.93%	5.18%	max	
Arterial Oxygen Content (CaO2)	11.057%	6.10%	min, max	
Centralvenous O ₂ Saturation	41.22%	1.87%	min, max	
Central Venous Ppressure	0%	0%	min	
C-Reactive Protein	86.77%	80.86 %	max	
Creatinine	1.66%	0.14%	max	
Diastolic Blood Pressure	0%	0%	min, max	
Fibrinogen	17.81%	14.23%	max	
Inspired Fraction of Oxygen (FiO2)	2.71%	1.28%	min,max	
Haemoglobin	1.965512	0.31%	min	
Heartrate	0%	0%	min,max	
International Normalized Ratio (INR)	1.55%	0.44%	max	
Lactate Dehydrogenase	9.05%	8.65%	max	
Lymphocytes	10.49%	14.33%	mean	
Mean Blood Pressure		0%	0%	min, max
Neutrophils		10.49%	14.33%	mean
Platelet Count		1.55%	0.19%	mean
Partial Pressure of Oxygen Dioxide ($PaCO_2$)		1.15%	0.018%	max
partial Pressure of Oxygen PaO_2		1.15%	0.018%	max
Peripheral O ₂ Saturation		0%	0%	max
Systolic Blood Pressure		0%	0%	min,max
Partial Venous Pressure of Oxygen Dioxide $PvCO_2$		43.71%	29.29%	max
oxygen saturation (SaO_2)		4.19%	1.23%	max
Spontaneous Respiratory Rate		1.38%	0.13%	max
Temperature		0.018%	0%	min, max
Urea		1.66%	0.13%	max
White Blood Cell Count		2.22%	0.33%	min, max

Table S-2: .