

Table A1. STM32L442KC technical parameters.

INDEX	Detailed parameters
Core	ARM Cortex M4
Program memory	256 kB
Bus width	32 bits
ADC	2*12 bit
Maximum clock frequency	80 MHz
Number of inputs/outputs	26 I/O
Supply voltage	1.71-3.60V

Table A2. Detailed configuration of MCU pins.

PIN	Configuration	PIN	Configuration
PA0	Bluetooth RTS Pin	PA15	SD Card CS Pin
PA1	Bluetooth RES Pin	PB0	BAT ADC
PA2	Bluetooth RX Pin	PB1	ECG circuit output pin
PA3	Bluetooth TX Pin	PB3	SD Card SCK Pin
PA6	KEY PWR	PB4	SD Card MISO Pin
PA7	POWER CTRL	PB5	SD Card MOSI Pin
PA8	Bluetooth LED Pin	PB6	ADXL345 output pin
PA11	IIC SCL	PB7	MAX30102 output pin
PA12	IIC SDA	VDD	3.3 V

Table A3. Statistical information on subjects in the four datasets.

	VitalDB (N = 1100)	MIMIC-III (N = 1100)	UCI (N = 100)	Self-made (N = 18)
Age (year)	59.0 ± 15.0	-	-	23.9 ± 1.8
Male	57.7 %	-	-	38.9 %
Height (cm)	162.5 ± 9.6	-	-	167.2 ± 6.5
Weight (kg)	60.8 ± 11.7	-	-	61.3 ± 8.8
BMI (kg/m²)	20.9 ± 3.4	-	-	23.9 ± 1.8
SBP (mmHg)	118 ± 19	124 ± 23	130 ± 22	108 ± 13
DBP (mmHg)	62 ± 12	60 ± 13	68 ± 11	69 ± 9

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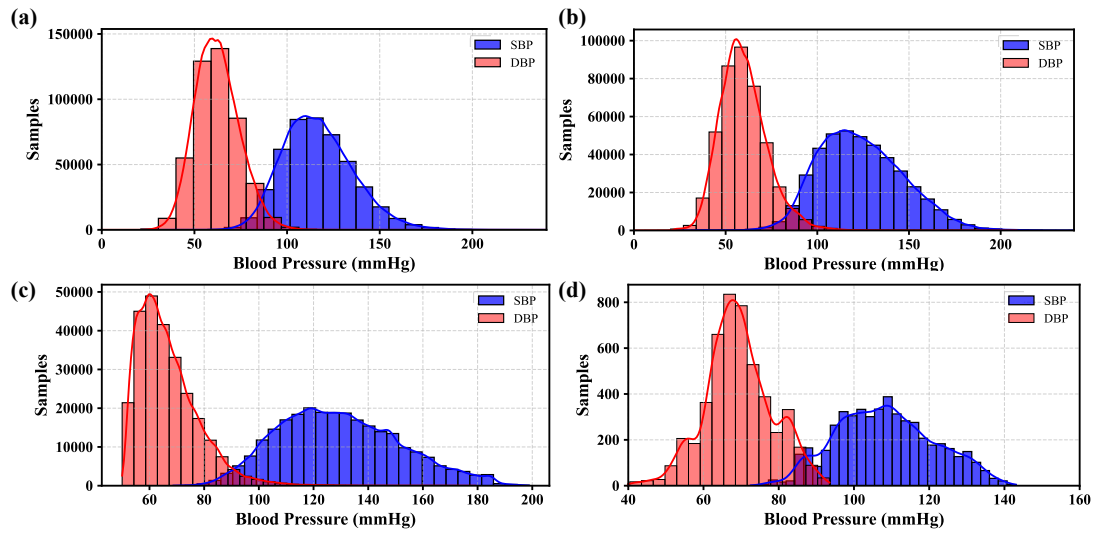


Fig.S1. Distribution of SBP and DBP in the four datasets. (a) VitalDB; (b) MIMIC-III; (c): UCI; (d): Private dataset.