$\begin{aligned} & \text{data} = \{\{1,347\}, \{2,264\}, \{3,264\}, \{4,308\}, \{5,316\}, \{6,264\}, \{7,264\}, \{8,376\}, \{9,264\}, \\ & \{10,264\}, \{11,264\}, \{12,470\}, \{13,313\}, \{14,264\}, \{15,264\}, \{16,316\}, \{17,264\}, \{18,264\}, \\ & \{19,322\}, \{20,264\}, \{21,264\}, \{22,264\}, \{23,331\}, \{24,264\}, \{25,264\}, \{26,264\}, \{27,317\}, \\ & \{28,264\}, \{29,264\}, \{30,264\}, \{31,322\}, \{32,264\}, \{33,264\}, \{34,363\}, \{35,264\}, \{36,264\}, \\ & \{37,264\}, \{38,387\}, \{39,264\}, \{40,264\}, \{41,272\}, \{42,342\}, \{43,264\}, \{44,264\}, \{45,347\}, \\ & \{46,264\}, \{47,264\}, \{48,264\}, \{49,340\}, \{50,264\}\}; \end{aligned}$

lm = LinearModelFit[data, x, x];

 $Show[ListLinePlot[data, PlotStyle \rightarrow Blue], Plot[lm[x], \{x, 0, 50\}, PlotStyle \rightarrow Red],$ $AxesLabel \rightarrow \{\text{``X - Time''}, \text{``Y - PPG Analog Reading (0-1023)''}\}, PslotLabel \rightarrow lm[\text{``BestFit'''}]]$

