area with lower cost and fast detection time [28]. According to Muhammad et al. [29] performed early-stage fire detection on images taken from CCTV cameras with CNN and proposed a network for response. According to Fan et al. [30] succeeded in detecting fire with CNN using long-range infrared images. Wu et al. They benefited from the color and movement characteristics of the flame in order to detect the fire. They realized whether there was a real fire and the marking of the fire area with the CNN algorithm.

Considering the motivations described above, an advanced fire detection method was studied in this study. The work can be summarized as follows:

1. Since the fire may have flames in different shapes and colors depending on the fuel type, flame detection has been made with the decision taken.