Seniors facing a fall without immediate assistance are at significant risk, necessitating proactive measures. Installing edge surveillance cameras with fall detection capabilities and instant alarm triggering can effectively mitigate potential harm. This project focuses on developing an image classification system utilizing the advanced YOLO v8 computer vision architecture. The model is trained to differentiate between binary sample images depicting falls (positive) and those without falls (negative), comprising 5.6 million parameters. With a top-1 accuracy of 95.12% and a flawless top-5 accuracy of 100%, the model demonstrates robust performance. Moreover, integration of a YOLO v8 pose model enhances classification accuracy by estimating keypoints of human objects. This combined approach enables real-time event detection by processing video batches efficiently. For access to the project code, visit <https://github.com/s698667/falldowndetection>