Realtime Automatic Multidialectal Speech Recognition systems require a dialect identification module. However, dialect identification is still challenging because similarities between dialects tend to be higher than between languages. Hence, Spoken Arabic dialect identification systems must detect the speaker's grammatical, lexical, and phonological variation in pronunciation using Arabic dialects representing low-resource languages in Artificial Intelligence and Natural Language Processing. Therefore, ASDI system will detect whether the dialect belongs to Gulf, North Africa, or Levantine countries, where each one has its own specific dialect. It can be the front of many multidialectal applications including multidialectal speech translation and recognition, especially during meetings and international conferences. Moreover, ASDI system is expected to enhance human-computer interaction applications such as multilingual and multidialectal conversational systems. It will help in providing new services for e-health and telemedicine, especially important for older and homebound people who can only speak their own dialects. Our idea is composed of two major steps: a) The creation of a new Spoken Arabic Dialect Identification dataset, containing more than 180 hours (18 hours per dialect) and b) ASDI Model: Building a wav2vec2.0-based model that detects the spoken dialect.