Development of a Marketing System for Recognizing Customer Attribute Using Pressure Sensors

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In this paper, we propose an automated marketing information system for recognizing customer attributes using pressure sensors and artificial intelligence technology. In this case, the customer attribute refers to the gender of customers in retail outlets such as supermarkets, shopping malls and shopping centers. In Japan, many retailers are now facing problems of low productivity per unit selling area. The ability to recognize customer attributes enables retailers to target a specific customer class, which can improve responses to special sales promotions and lead to improved sales. At the place of measurement, such as the entrance or shopping aisles, the system can recognize the attributes of various customers in detail. The apparatus used in this study is a pressure sensor that has the advantage of not invading customer privacy. Customer gender is estimated by measuring foot size, foot shape, step and weight. From the obtained experimental results, we verified that the proposed system can recognize customer attributes. Our research can contribute to raising the productivity of a retail area using information technology.

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