**66.Wall-Following Robot Navigation Data**

1. 数据库网址

http://archive.ics.uci.edu/ml/datasets/Wall-Following+Robot+Navigation+Data

2. 数据库描述

【1.[数据集名称]数据集由[机构名或人名]采集；】The data used in our experiments were collected by Ananda Freire, Marcus Veloso and Guilherme Barreto, from department of Teleinformatics Engineering,Federal University of Ceará.【2.用于[什么实验目的]】We used to distinguish the robot’s moving.【3】The data were collected as the SCITOS G5 robot navigates through the room following the wall in a clockwise direction, for 4 rounds, using 24 ultrasound sensors arranged circularly around its 'waist'. The provided files comprise three different data sets. The first one contains the raw values of the measurements of all 24 ultrasound sensors and the corresponding class label (see Section 7). Sensor readings are sampled at a rate of 9 samples per second. The second one contains four sensor readings named 'simplified distances' and the corresponding class label. These simplified distances are referred to as the 'front distance', 'left distance', 'right distance' and 'back distance'. They consist, respectively, of the minimum sensor readings among those within 60 degree arcs located at the front, left, right and back parts of the robot. The third one contains only the front and left simplified distances and the corresponding class label.【4】The database has 5456 samples, respectively belong to traing with 5000 samples and testing with 456 samples. As shown in Table 1.

Table 1 Category Distribution of Robot Dataset [根据数据库绘制]

|  |  |  |  |
| --- | --- | --- | --- |
| Categories | Training | Testing | Total Number of Samples |
| Move-Forward | 2021 | 184 | 2205 |
| Slight-Right-Turn | 757 | 69 | 826 |
| Sharp-Right-Turn | 1922 | 175 | 2097 |
| Slight-Left-Turn | 301 | 27 | 328 |
| Total number of samples in total | 5000 | 456 | 5456 |

3. 精简描述

The Data in our experiment were collected by Ananda Freire, Marcus Veloso and Guilherme Barreto, from department of Teleinformatics Engineering,Federal University of Ceará. The dataset includes have 5456 samples, which used to distinguish the robot’s moving. Through which, we divided the dataset into two part, training data set with 5000 samples and forecasting data set with 456 samples.