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远的簇中，2个为异常值，1个为正常值（左上角），算法将其3个都判定为异常值（基于最近邻）。另外，观察集中分布的区域可以发现，算法将正常值识别为异常值的出现频率比将异常值识别为正常值的频率要高。"] }, { "cell_type": "markdown", "metadata": {}, "source": ["### 这里尝试对PCA降维后的数据进行判定函数可视化，由于数据量太大，进行抽样绘制"] }, { "cell_type": "code", "execution_count": 22, "metadata": {}, "outputs": [{ "data": { "image/png": "iVBORw0KGgoAAAANSUhEUgAAAW4AAAD8CAYAAABXe05zAAAABHNCSVQICAgIfAhkiAAAAAlwSFlzAAALEgAACxIB0t1+/AAAADl0RVh0U29mdHdhcmUAbWF0cGxvdGxpYiB2ZXJzaW9uIDIuMi4yLCBodHRwOi8vbWF0cGxvdGxpYi5vcmcvhp/UCwAAE9tJREFUeJzt3X9sHOWdx/HP12unwUmOpMGHWgx23Cs0+BLywyppZQZeuBlThTuf+s/qQeUJWs6kFcAaHtHErA5vdAp70vPaTXZ6pmKCmA9Zb0wtqBqrqwV8ObBjyjAaAY6lRyWNQpEjdArwC7rwVo+XdhLYPtpwaYQaXcaSoxtjKFhSL7STSeIyDpkybx2AkpmI2CixAJ8dSkU6h2nyQU/Z4QvTfKl+dLh+ItU2Fm3uNfCAAWaQAQ+QaKyTS/m1zmrWaynTqBi5BBqyPUSIEo+jEVQ3EMkB1P/6XFc0YvhGQWqFd4qtjdwVcFZ4uFtXfVsQAQN+4BnUjaAqQ5MyIS2CeEWAeDCRhXUeyPu3UmBlPXrm1D7GvXrPp0X7Fnn3YG2/Yw3Njj7+j8sjkljR2p9UF3V8RBbXH5MvWp3oGjI5Cz+tj59RtOnO4kWnfo/vCxCqVswk6sxnGi4Tp70HbWjxt/3qrIkydKdUJxJlTCbrGcjXX8yO9jQNBW2h/xgBKpiPwIf5zf9ZB44WbzjX8TndKuxGn5aRcWfTbyVu9D8/GRa0S3wpk8ga/nE/3gpBUMP1v/RDfXRgVaz2MMYHkzDxu9fz9b4NbDhEFy/xCNcEOZDcmjYrlJLbKJ1Yqkl/pB1NCIZyfQfM7s5EwwFkWIR/49N1nPoKLgeB/5LhbOcyyaGfnwWgknxDAK3r5tbuN+P2AKH3EN5jJnchp3SkWCjHWQR4BMhPhpzfqqSDJUDZYGCAHhyTWKH73QH+dsUWH75ViiLEDgUCZzEQLv8/lmHSlfpw/k1bSFZ34+aJuYAqQxEsCNmuRG5/J/gMmrr8xg6qJe/cUnI0WLhAyAt8m3qw7SvbvmKUgmfD73ZqrjCanfmpwIugUfIcnu0EnAuSkQHwqzgKCDvtLOWGIYJ8aubB1V7mgJcUn6WsuVBD3/3APrYD9nS7LjOXU0ep/lnLUrpxqP4p5fuSO/vt2HZhe7vM4O5I/cCv+P/3nyV6M83WH+Y/Vua24cS1Hf0NPoaX13RGrKV/DXzmGQrfVbjtLQ7lHJ6S5Bg4xtWHPQpT7fIx1fZe9XwvFDEk16YbFs5dPUx0DzLYCCPQZvVY7W1qQ1MCHwUIHiQ5IwJfMxoFz8uhRvcKJlH8ObwBZlWBz57utnzuk8k8X1nqB2lerO+qt+ZKySbfhVy+1+/HmX1n4ddLAxRjdP0x9jHaW7KTgJ4dO4CnFf5Z/fDYxzq/vDG8z5SPr4fBGbYxVbwgfVWp5fU15LhRIiKFzpJVJfM/rDlf6nG5HhE/4S0MtEx2ksG6O1JOnI4ZxbtDrNBUb+xy5CbOhW5KBS1q8Hmn/dcxgfdPF4+IS/FpHwNvo7D4Lv3hiRhCGzU8r4SBEl9pzvE1OYMVFQF65xBO0UQ+CVVZyXhsLhJzIz7Kb8rLx3fWKBqP5vb93+5qsxCsS5Cd5p+ycFkdZwZeiQkxCvfhb2UCZ8ErC0Dm6XeXRAnMq4V05Bh2ZJKh1cYHHJdhXKjf45DidBoxaSrG/4Cf/eCIXx4TqtsllBJzOl3F3+VY2zMuNVqz4jpHexT8IyRnsvI3SLH3d2/9Ft8HjabzxfMBDgPOvVRE/W+Oxc+ElRWaDOdaGMN2k2iMcOHAnH2cGzZlQbRFCLfVzlJmnyA7Cv+iHhtZ0fWKLmOtN1VBBnxGhU/tagR4wOmPGbZd/JKyGb6ttTHsNyM0ZwKQAbLzxKp6nYmRaCNYMNZmIY3l7/7S9FE+A36Gbo4gC1M6hswD/p1NBv5fyUpbuvVhkMmKqE3PuI3y8ybtzyOqePrpcQ+oAoGJ9LOyHopwZmxf3sfl/4AyF47xrLEjUwWL2Ex8n5bMnvDjMBwd7CCWwvVCbTSuVr8XJuEmLKWrsV5oOf8gVOrx0M6dtwFrjJYJ31mxh7ZqxLmJbT/AR8Vpnd25bFAb/CmHE7y5T8tZDHHbMUIyjYSkQgAlYY7HuxK3f/7vPQX4jvZ7qW1H+RVGSh4Z37bUkeTdKrc9qKWZKu7vRTfRhVTHqnujEhGgUiE6ZOnTYyL+t+ONlk7PVx+6JvF/5p/3UqK1rOlcMBxMi4Af5dbg2mnXcPsubWF6H9o/Vyyk68DTbPUdbdOuYugW7tgqf4AS/BaMOuEBPwoC5BcXeRHJpNMc2N/Nv4r9Hnce5y47ywt7TGAmUytOiv47ZKJYpCe76IDRkmeZgVD6rQoJj8z1yyyVsuzm7gRbfJ5zOcKT2kTDNCB0JhldfXxVf8FnsQzH/PFzvDyHvQ18fcXy27NqaB4hPjRajXSIrv4bGk/9WjnQZK4Zdq1yWlJ3d5HWG3Svn+iAP6AJ43r8dQ9y5GM1Ce8dTe2v1pNEl9d3fqpfHGSeD3r7y+ALX/8G8xAp/Jd1fI1+/q6Oa/W88n+0cOs8H8C/wxtDpD+Qz4QM9kHN7AsUfB8nuf9xKVFsq1HhnzLQc/xIRM8X5Is6TVYh8Nrzw3dm3AgSGQGHzyI2D8vD7ogKCNNhg8tzbkOCbBbA9u/gK8DBUlxzBTiB6nyb5QNUtWyxLcUQ79NgytPRB+a68DNDS9WTIg5ApNbcUy4n/n8HMD6TutX8Dj0ZBNJsaZf6o+EMWzzi1YRVyAA+1RLZVQpqDoPbSuLe7ZgJNtC5YuYUtWABbsYEtMwQnCgE7/I3W2yBMNo7I8UZWU7uqdwYIf0GnHX5fqpNB8iqpqp6yhVSakmvbvKQ+k0nVQzKrf7wfLbtkDZIhSg/ZgRMY0h9tBNr/EOOrI7+q3O+V8CnD2Tn0ujZpmL8Qhs8IdqFsR+Vq3PEJHzk5eoL7VDF0xM7zJvbf32thaMx+rsePfZzcfdff06IdGj8Q3zV+TVfbZ5k8+rgXY3E6RtrJaSnXwQ8Zc3h9tyyr9feuTxhYF79NDXJEdyXkxXGoWqLAMlDwjeYV4FTd3r+Lf+EQJ/U2B7A6r56o9SoYn/q+z58/yrE0/wJZ+4LLxZbqMdDAVwt/Tmn8vtvDRTK4A9OBPp0AAAAElFTkSuQmCC",

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