数字图像处理

第十周课堂练习

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讲解

1. OpenCV 中鼠标响应的应用

```cpp
namedWindow("mouseCallback");
imshow("mouseCallback", selectMat);
setMouseCallback("mouseCallback", on_mouse, &selectMat);
waitKey(0);
destroyAllWindows();
//计算roi
contours.push_back(mousePoints);
if (contours[0].size() < 3) {
    std::cout << "failed to read image!:" << std::endl;
    return -1;
}

drawContours(m, contours, 0, Scalar(0), -1);

m.copyTo(dstMat);
```
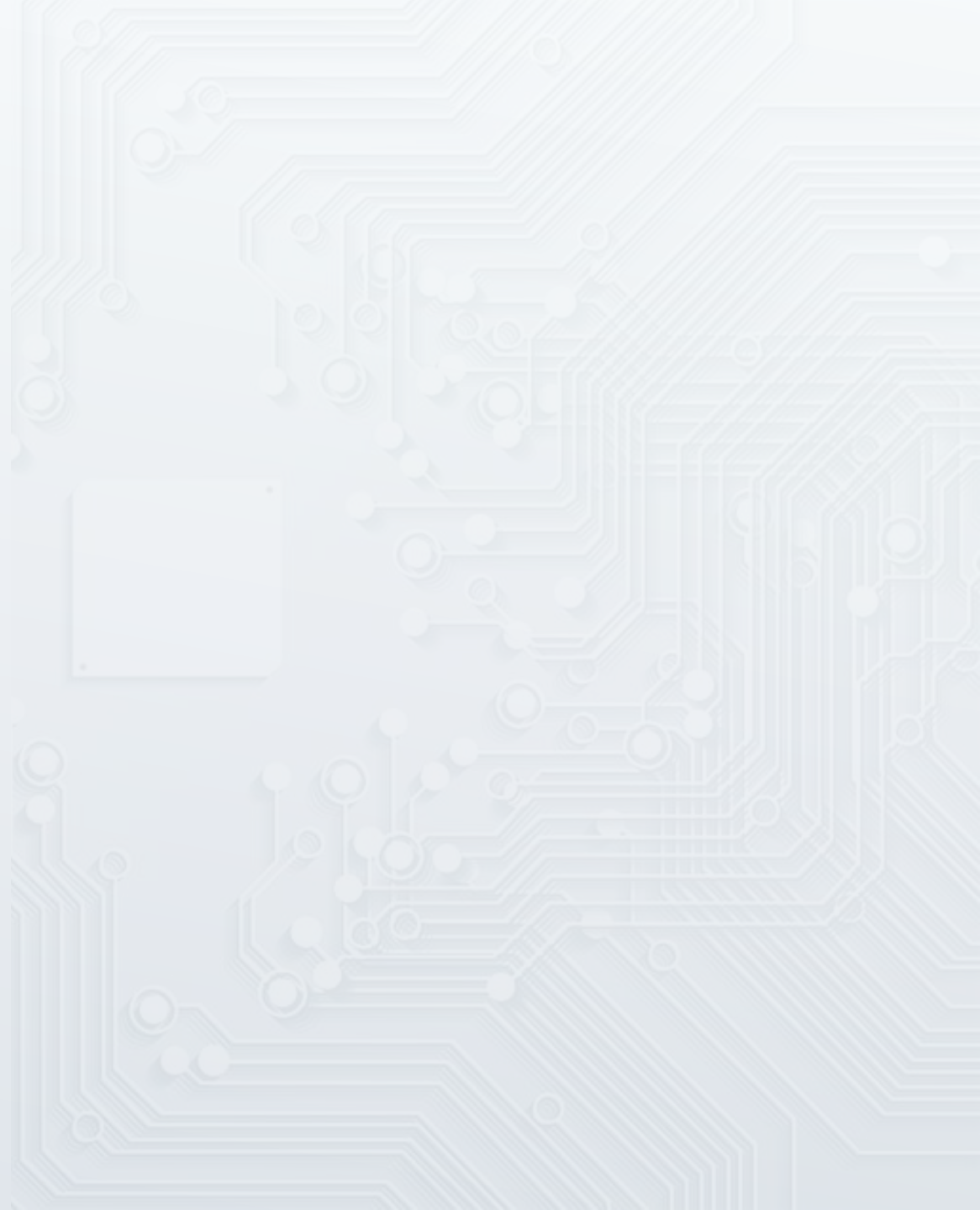
```cpp
void on_mouse(int EVENT, int x, int y, int flags, void* userdata)
{

    Mat hh;
    hh = *(Mat*)userdata;
    Point p(x, y);
    switch (EVENT)
    {
    case EVENT_LBUTTONDOWN:
    {
        points.x = x;
        points.y = y;
        mousePoints.push_back(points);
        circle(hh, points, 4, cvScalar(255, 255, 255), -1);
        imshow("mouseCallback", hh);
    }
    break;
    }

}
```

讲解

2. 图像的傅里叶变换

见源码及演示

讲解

3. 去除图像的特定频率操作

见源码及演示