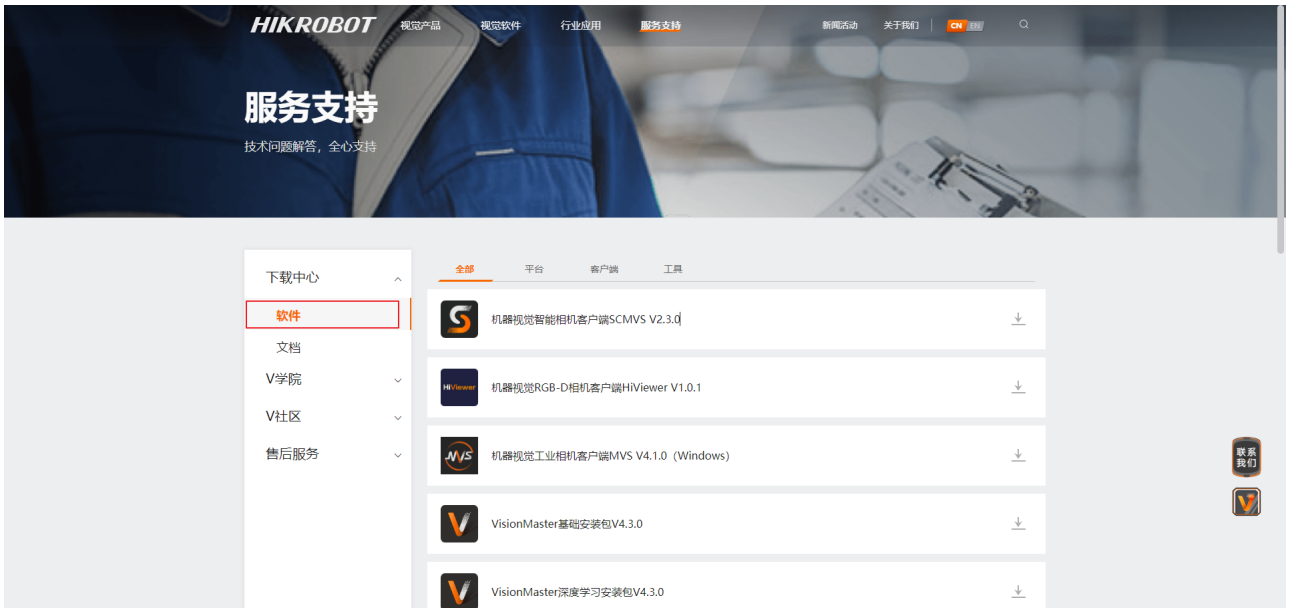
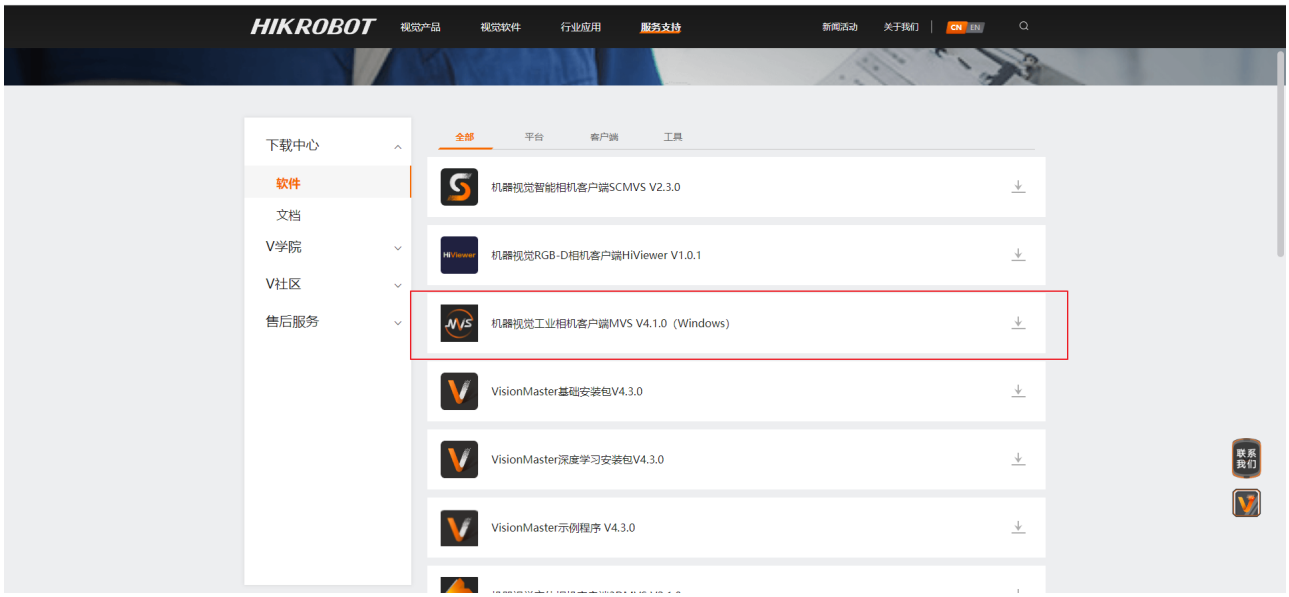
1：安装海康相机驱动

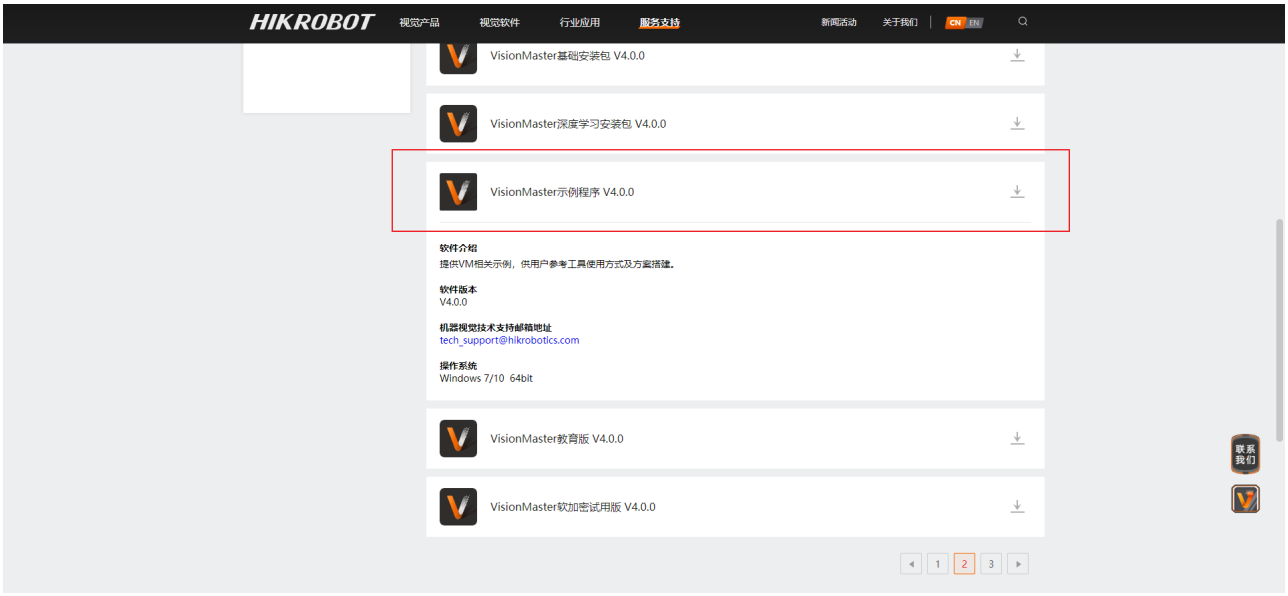
- **1**. 海康下载中心，如下图所示



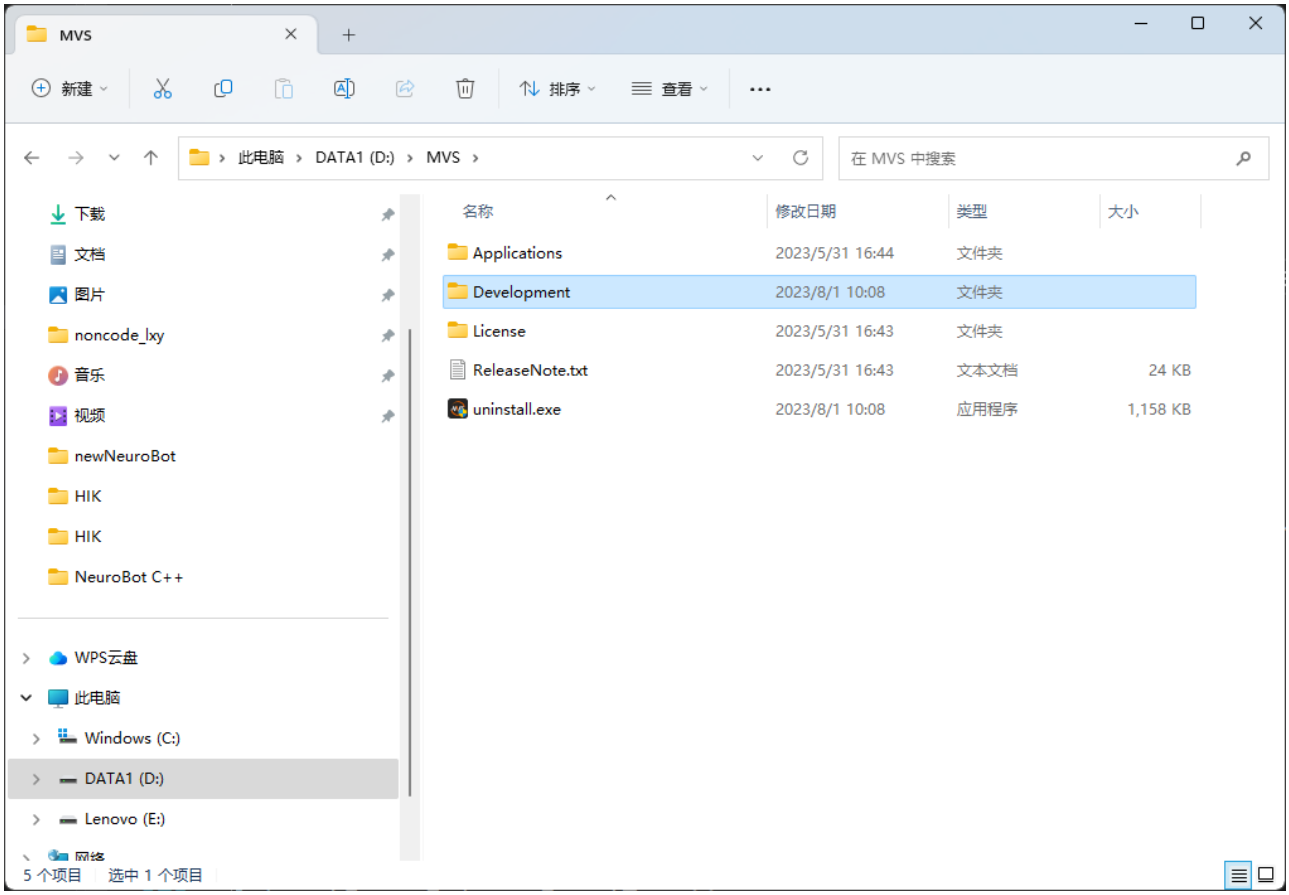
- **2**. 下载MVS（客户端）



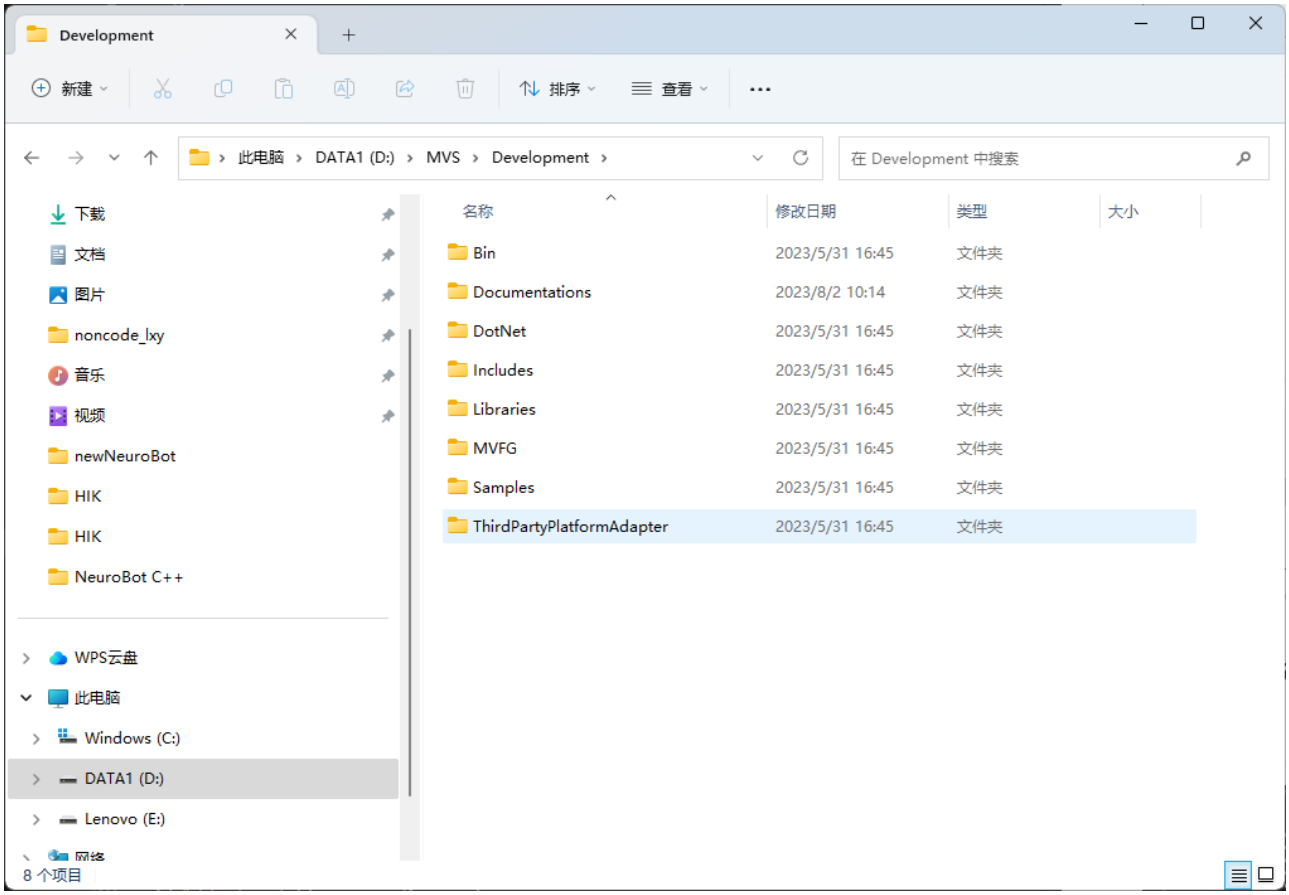
- **3**. 下载简单示例程序（SDK）

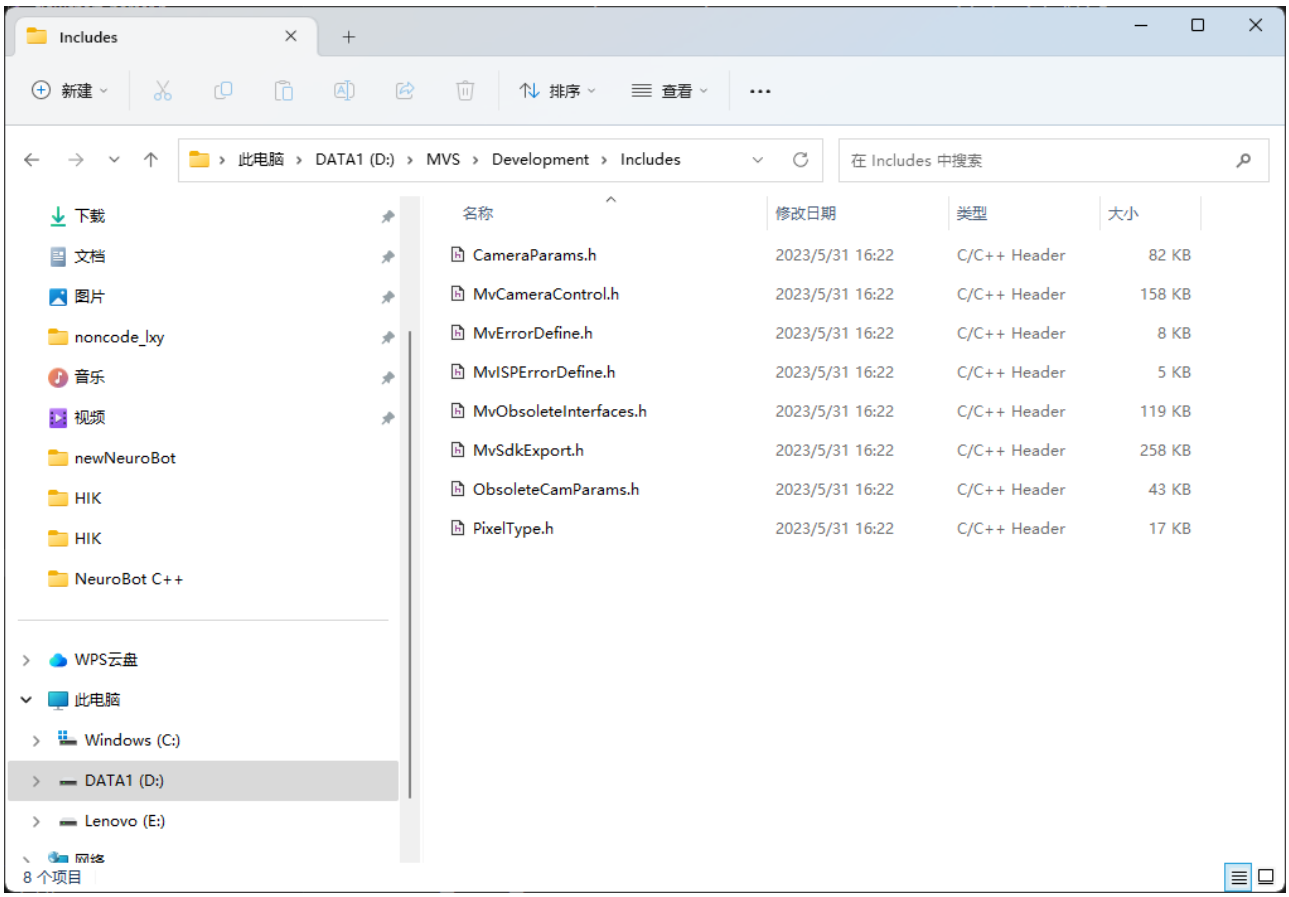


- 下载完成后文件夹如下图所示



- 顺序点击Development文件夹，Includes文件夹

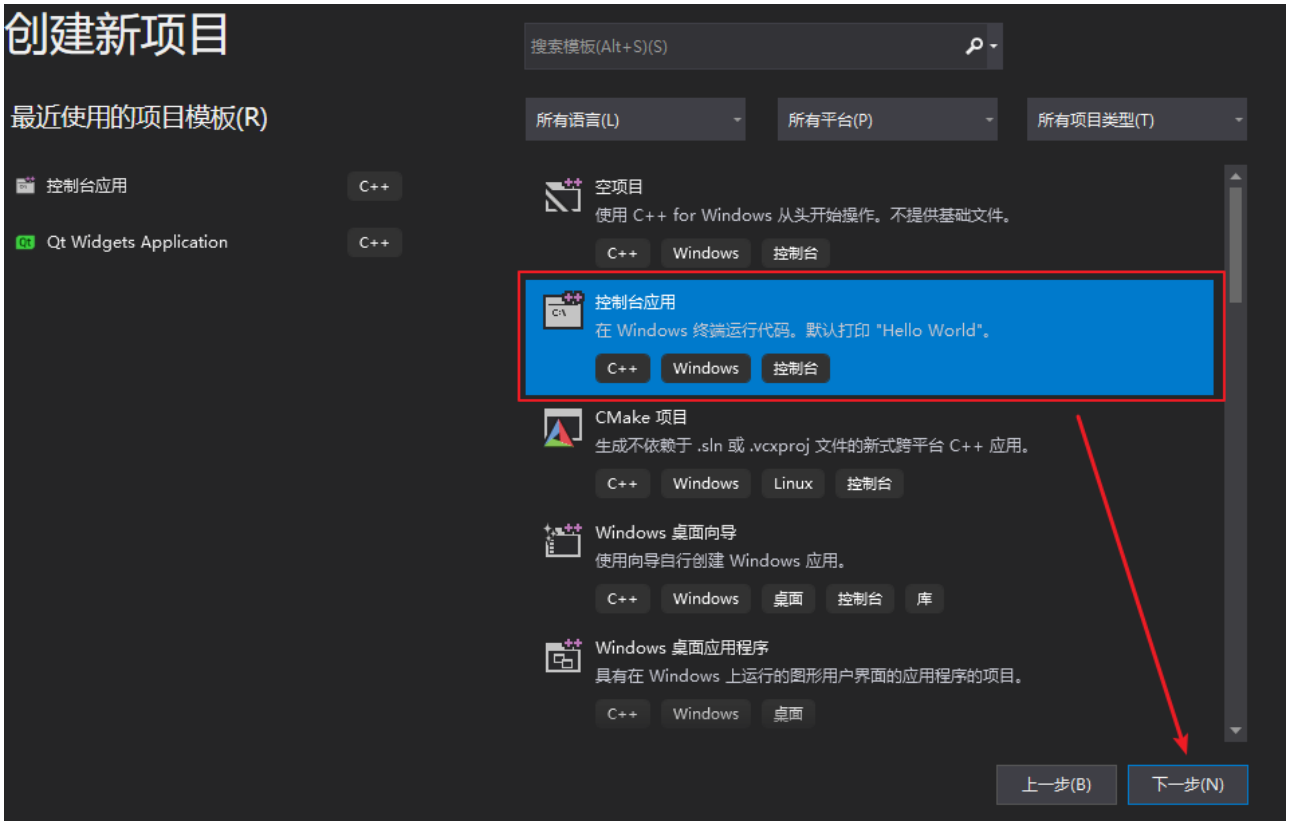




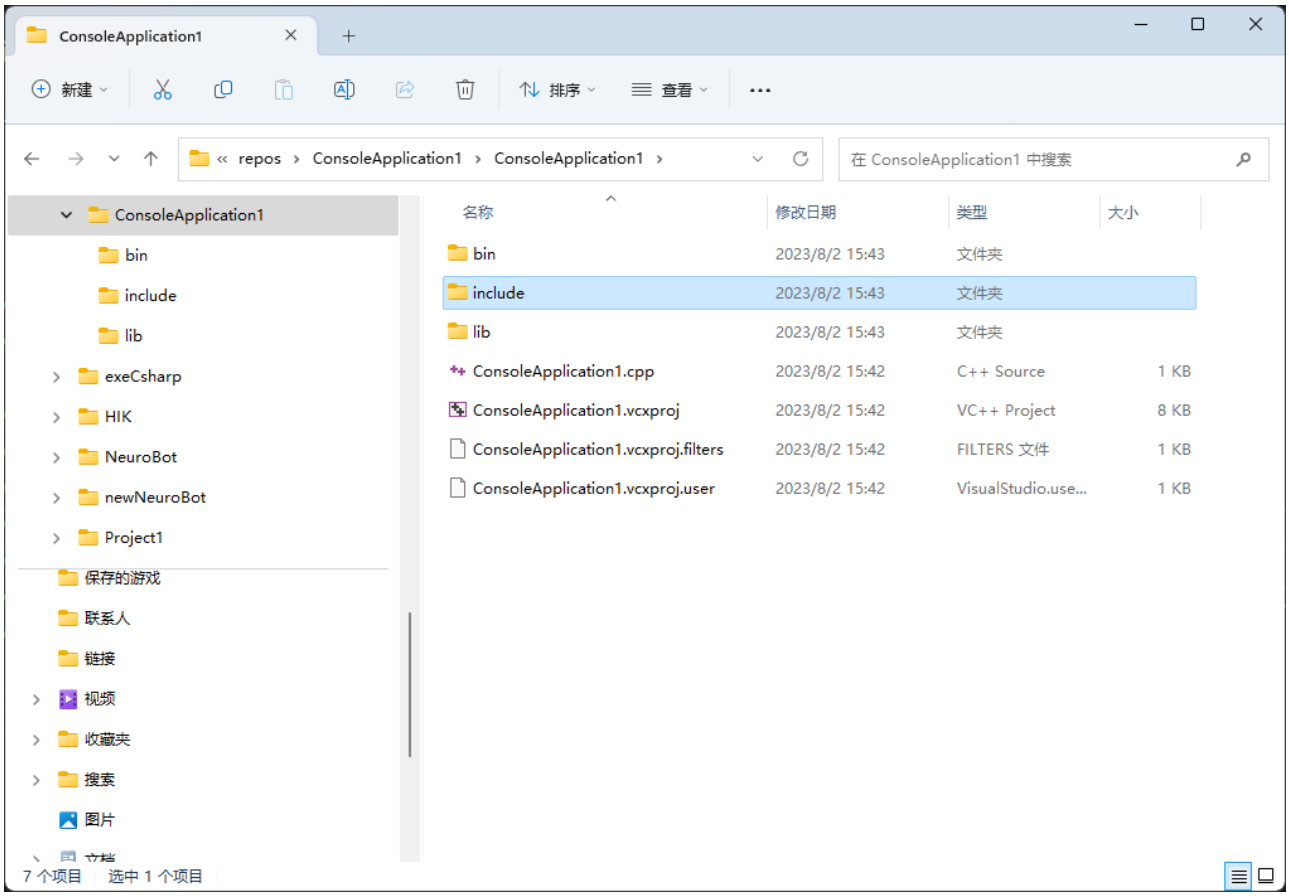
- 我们在开发中需要使用这8个头文件

2：配置 Visual Studio

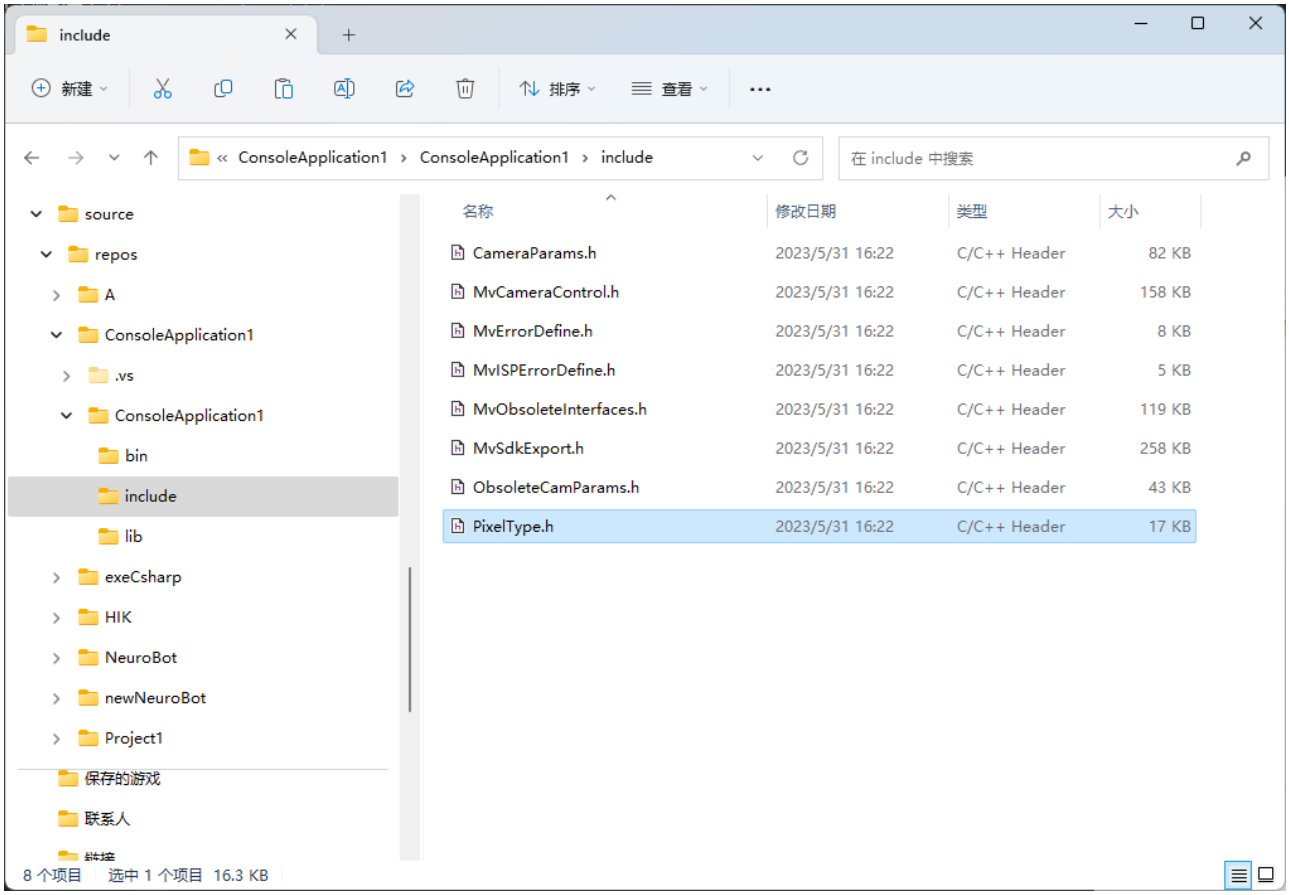
- **1**. 新建C++控制台应用



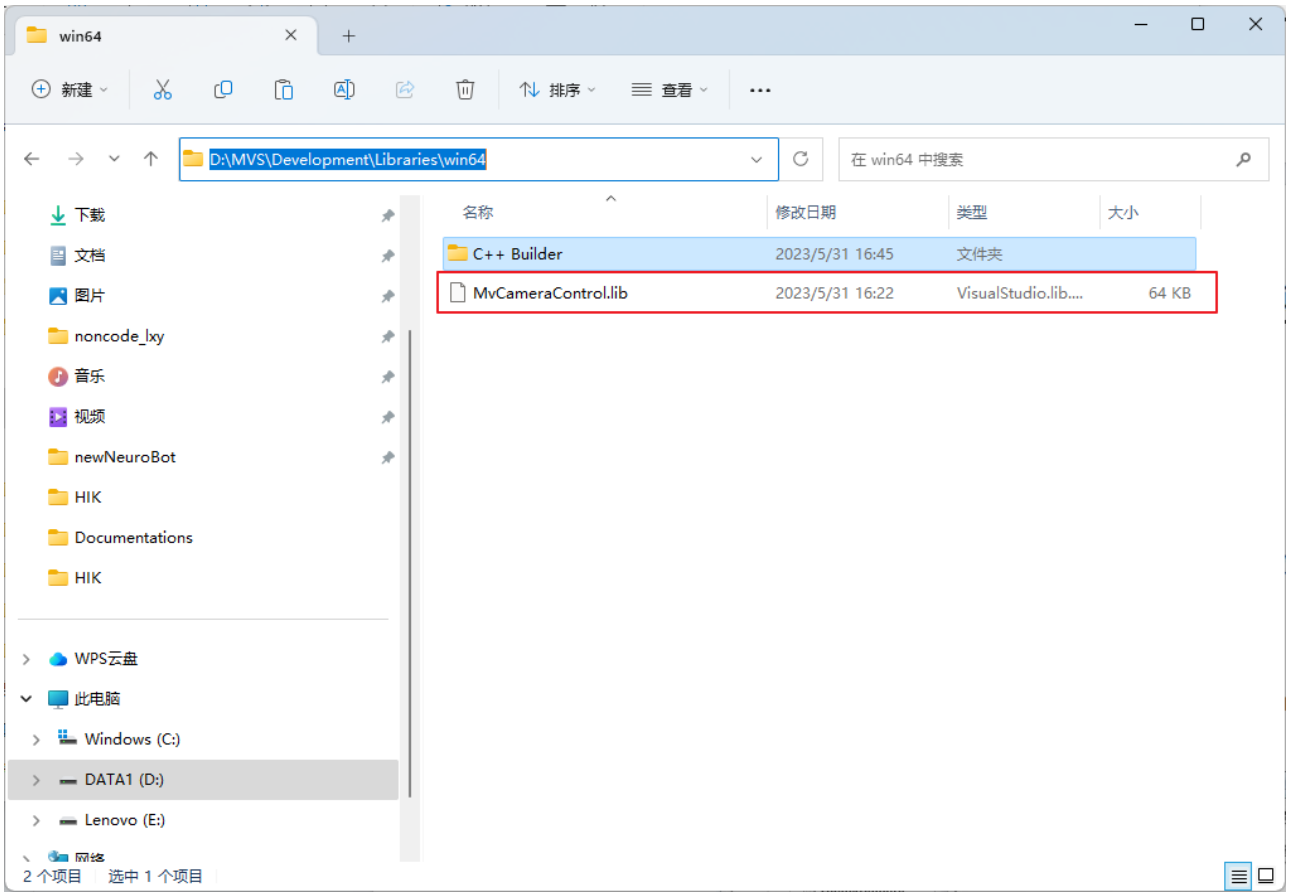
- **2**. 在该项目下，新建立lib， bin， include三个文件夹



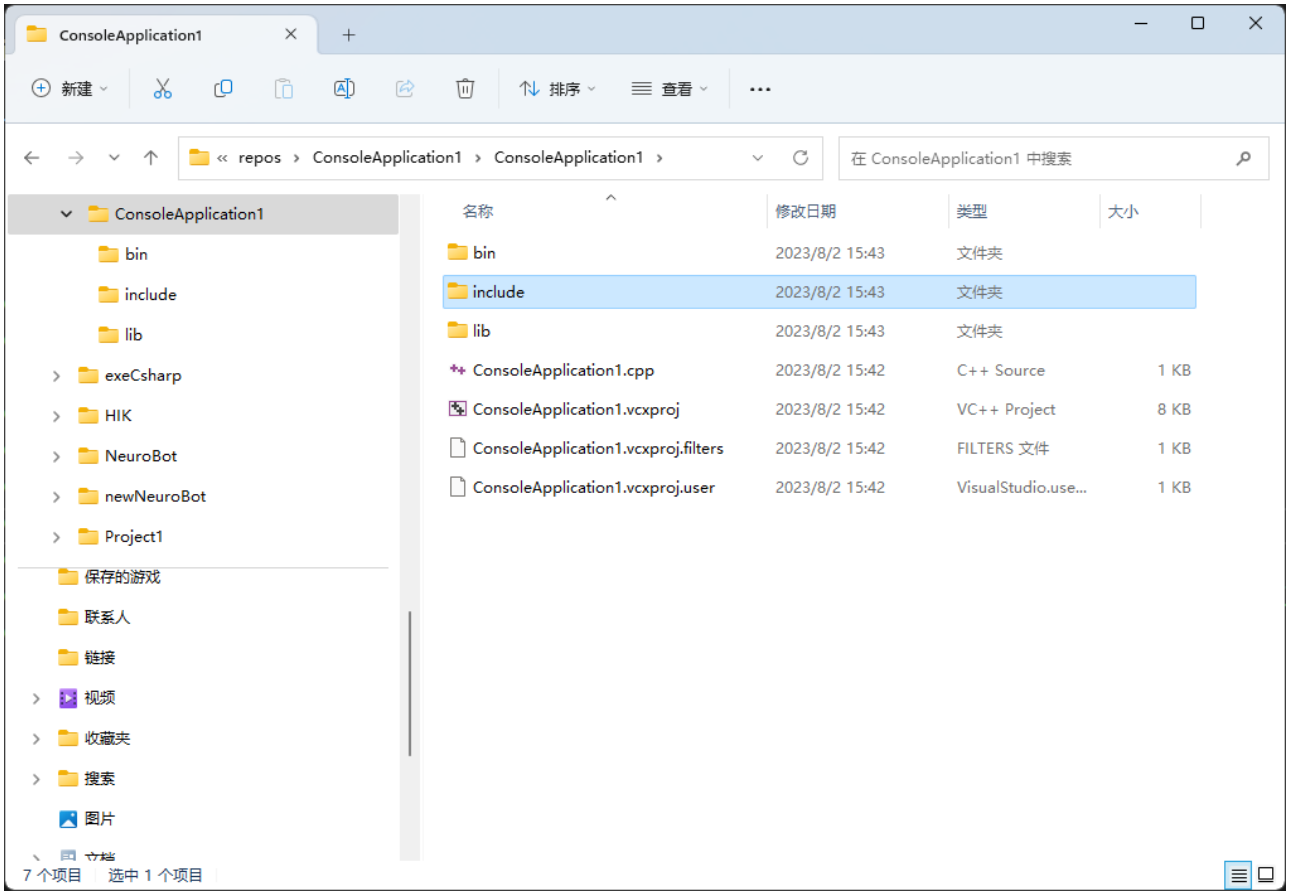
- **3**. 将之前8个头文件放在include文件夹中，以及C++ SDK包中的include文件夹



- **4**. 把Development\Libraries\Win64 下的 MvCaemraControl.lib 放在lib文件夹中，以及C++ SDK包中的lib文件夹



- **5**. 将C++ SDK包中的bin文件夹下所有文件复制到现在项目bin目录下



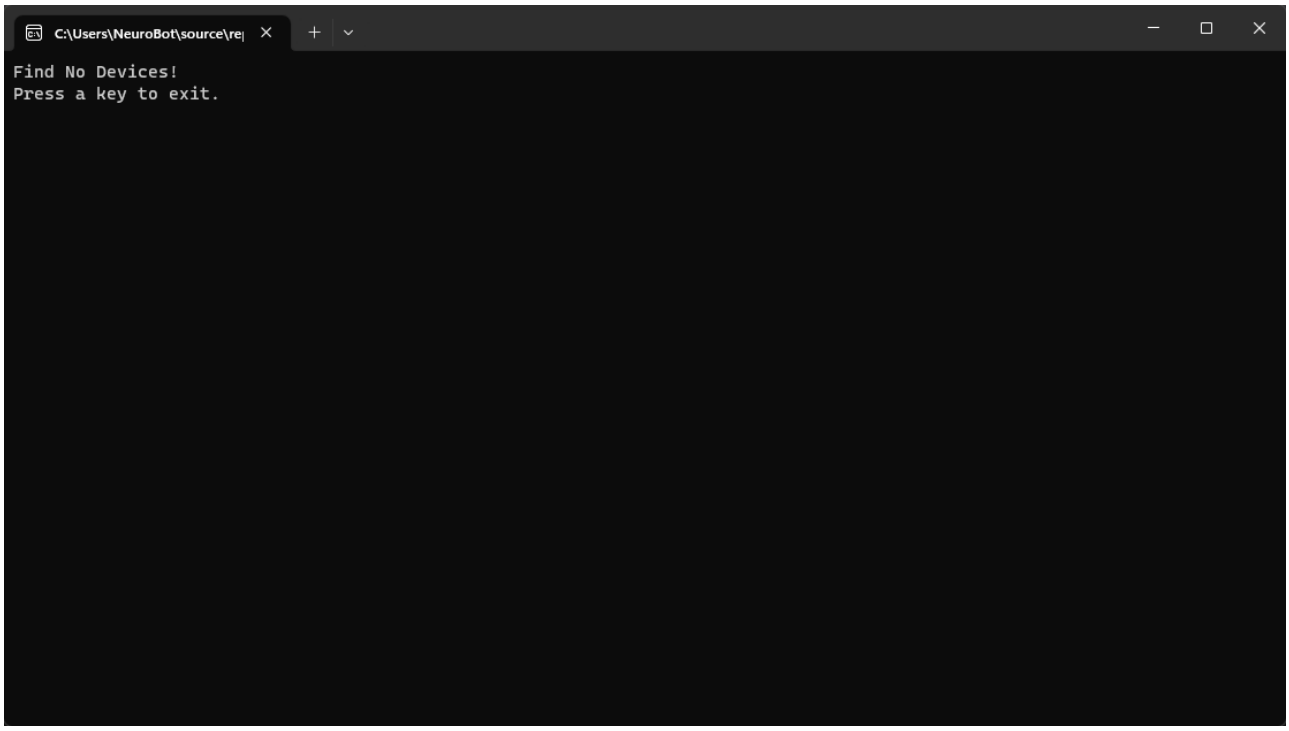
3：代码开发

- **1**. 查看是否有可用的设备，成功会列举出设备，失败会返回错误码。

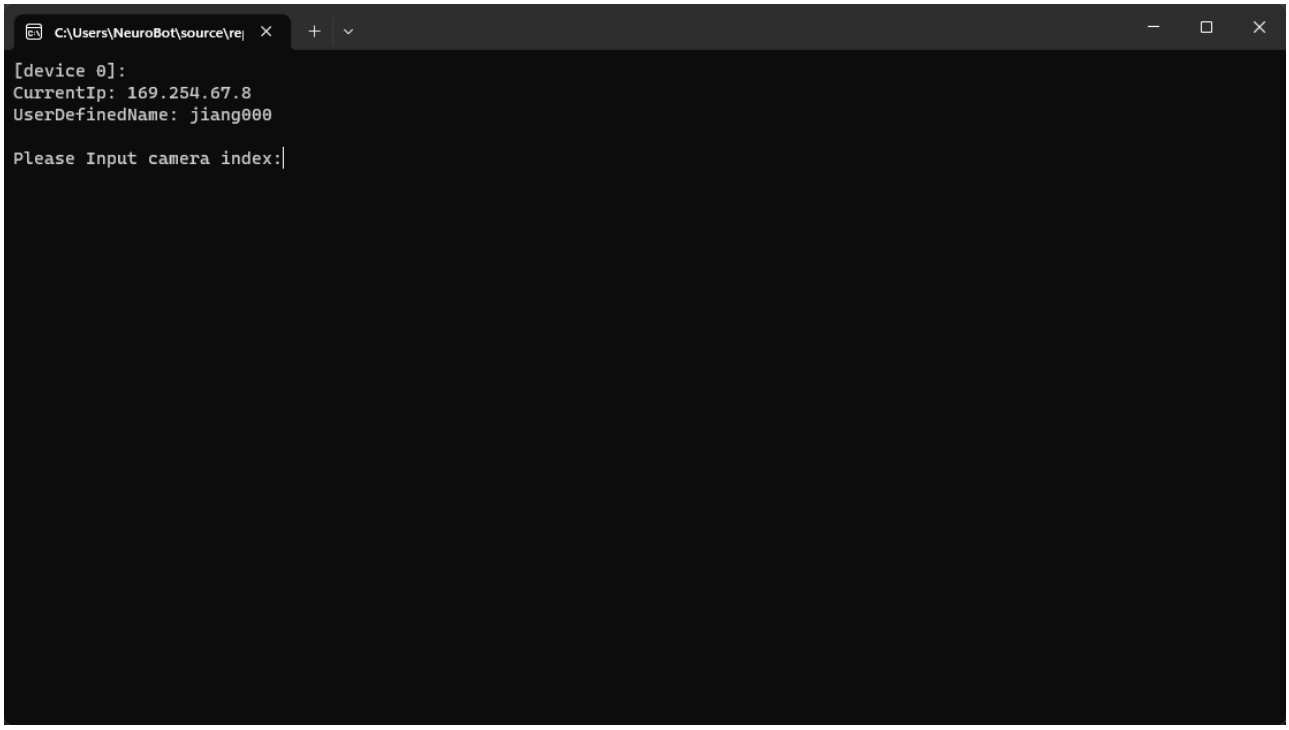
```
MV_CC_DEVICE_INFO_LIST stDeviceList;
memset(&stDeviceList, 0, sizeof(MV_CC_DEVICE_INFO_LIST));
// 搜索所有的可用设备，并返回状态码，成功返回0
nRet = MV_CC_EnumDevices(MV_GIGE_DEVICE | MV_USB_DEVICE, &stDeviceList);
// 如果搜索设备失败，返回特定的状态码。
if (MV_OK != nRet)
{
    printf("Enum Devices fail! nRet [0x%x]\n", nRet);
    break;
}
// 打印所有的可用设备的信息
if (stDeviceList.nDeviceNum > 0)
{
    for (unsigned int i = 0; i < stDeviceList.nDeviceNum; i++)
    {
        printf("[device %d]:\n", i);
        MV_CC_DEVICE_INFO* pDeviceInfo = stDeviceList.pDeviceInfo[i];
        if (NULL == pDeviceInfo)
        {
            break;
        }
        PrintDeviceInfo(pDeviceInfo);
    }
```

```
}
else
{
    printf("Find No Devices!\n");
    break;
}
```

- **1.1**. 失败，显示没有可用的设备



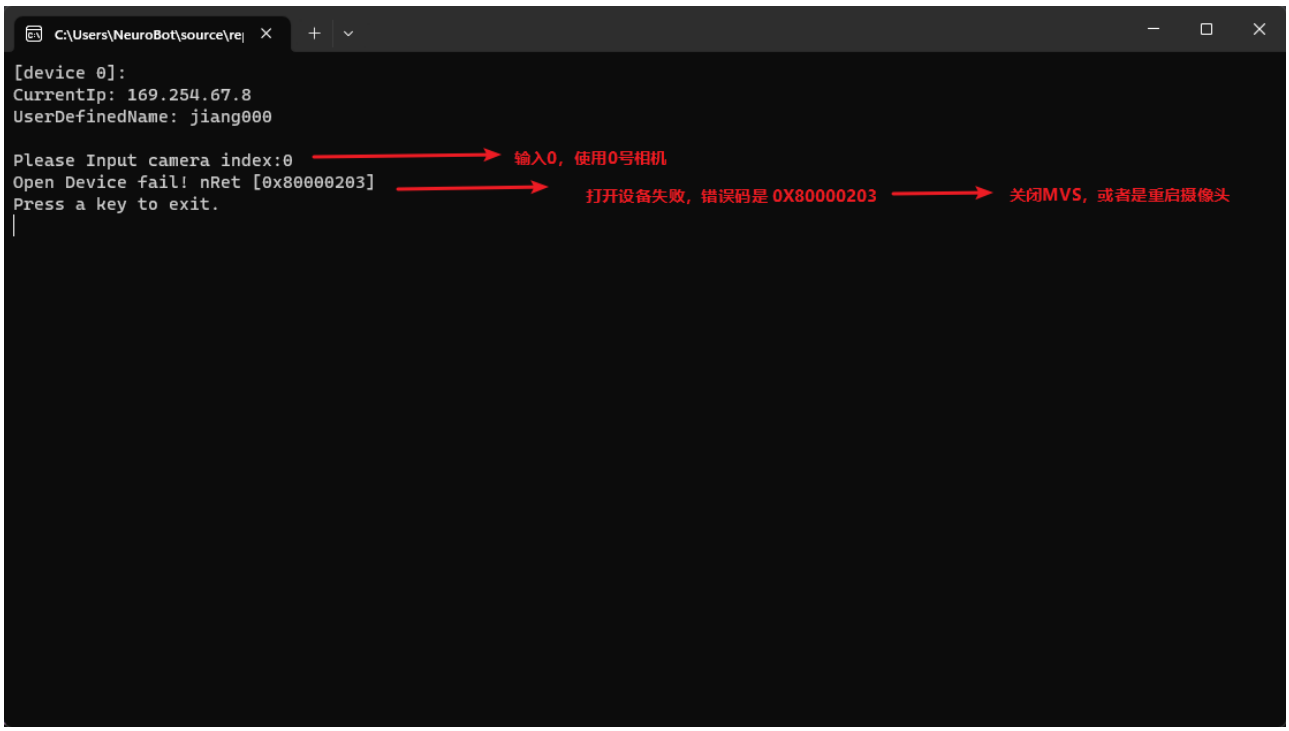
- **1.2**. 成功，显示可用的设备为设备0，并且显示了当前的IP地址，以及设备名称。



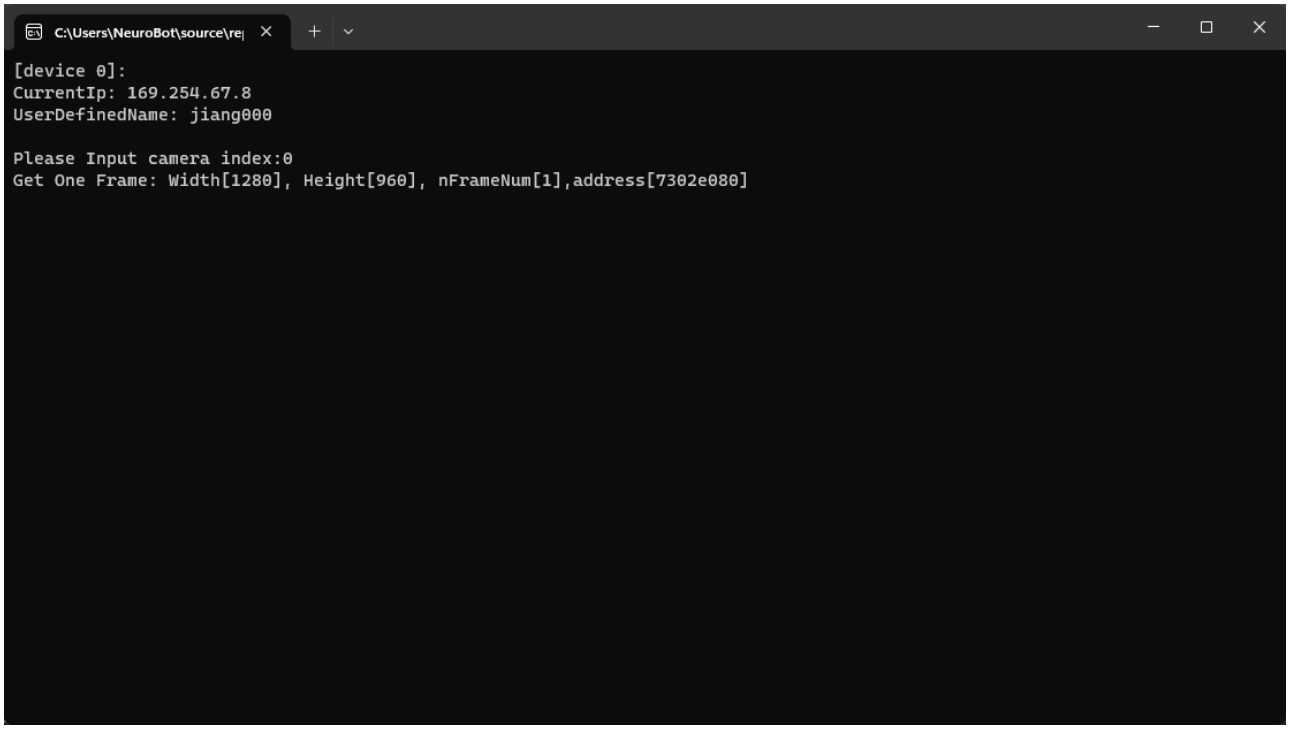
- **2**. 选择使用一个相机，并且打开它。

```
// 输入数字，选择一个特定的相机
printf("Please Input camera index:");
unsigned int nIndex = 0;
scanf_s("%d", &nIndex);

if (nIndex >= stDeviceList.nDeviceNum)
{
    printf("Input error!\n");
    break;
}

// Select device and create handle
nRet = MV_CC_CreateHandle(&handle, stDeviceList.pDeviceInfo[nIndex]);
if (MV_OK != nRet)
{
    printf("Create Handle fail! nRet [0x%x]\n", nRet);
    break;
}

// Open device
nRet = MV_CC_OpenDevice(handle);
if (MV_OK != nRet)
{
    printf("Open Device fail! nRet [0x%x]\n", nRet);
    break;
}
```

- **2.1**. 失败，根据错误码进行纠错

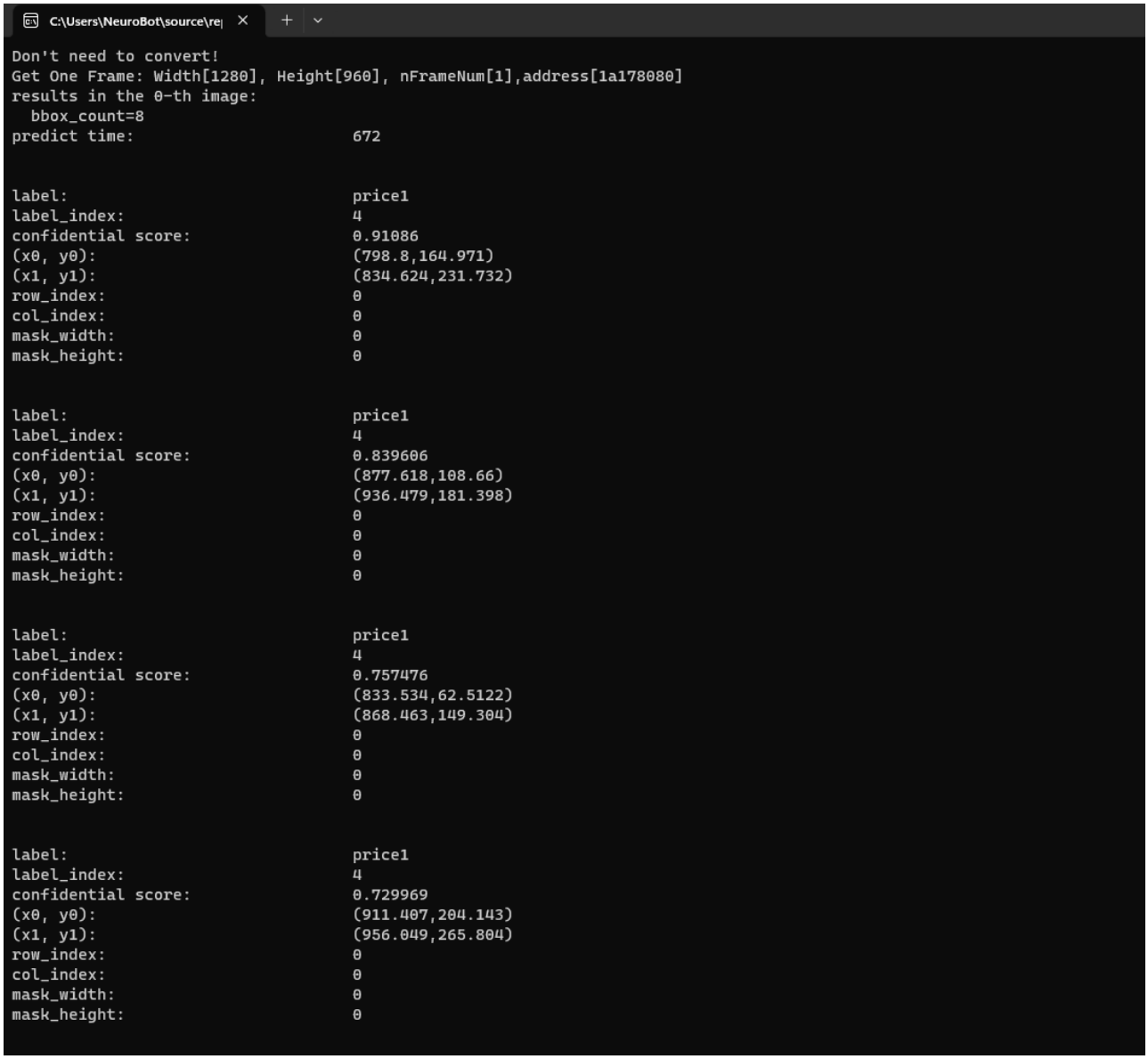


- **2.2**. 成功，获取了一帧图像



- **3**. 一秒采集一张图片，进行预测

- 结果如图所示

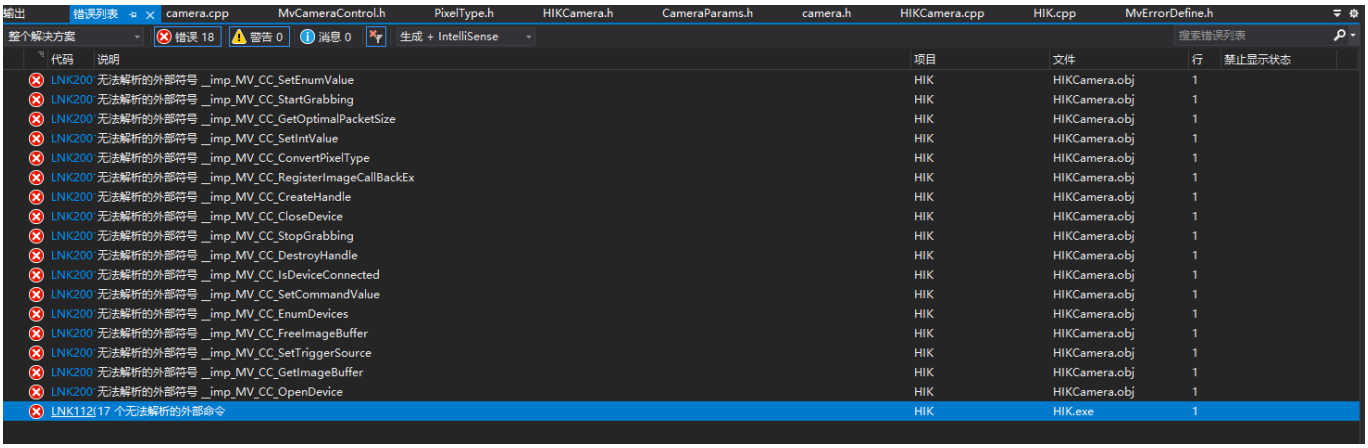


- 修改采样的频率

```
// Stop grab image
nRet = MV_CC_StopGrabbing(handle);
if (MV_OK != nRet)
{
    printf("Stop Grabbing fail! nRet [0x%x]\n", nRet);
    break;
}
// change time if you want, such as 2 seconds is 2000
// 5 scconds is 5000
// 0.5 seconds is 500

Sleep(1000);
```

4：可能出现的问题

- **1**. 17个无法找到的外部符号



- 将 MvCameraControl.lib 添加到附加依赖项中