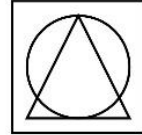




ThetaWin: Distribution simulator

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Overview

Graphical MS Windows user interface (Schrausser, 2023a) for Theta (Schrausser, 2009) applications generating distributions and estimators for several parameters θ within different designs via bootstrap method, see console applications for distribution functions and simulations (Schrausser, 2023b).

C++ Source of main functions

```
#include "stdafx.h"
#include "TW.h"
#include "TWDlg.h"
#include "TWInfo.h"
#include "ThetaCMD.h"
#include "Theta_SCMD.h"
#include "Theta_QCMD.h"
#include "Theta_QvCMD.h"
#include "Theta_rQCMD.h"
#include "doc_rQ.h"
#include "doc_Q.h"

#ifdef _DEBUG
#define new DEBUG_NEW
#undef THIS_FILE
static char THIS_FILE[] = __FILE__;
#endif

BEGIN_MESSAGE_MAP(CTWApp, CWinApp)
//{{AFX_MSG_MAP(CTWApp)
ON_COMMAND(ID_PROGRAMM_BEENDEN, OnProgrammBeenden)
ON_COMMAND(ID_VERTEILUNGSFORM_THETA, OnVerteilungsformTheta)
ON_COMMAND(ID_PROGRAMM_INFO, OnProgrammInfo)
ON_COMMAND(ID_VERTEILUNGSFORM_THETAS, OnVerteilungsformThetas)
ON_COMMAND(ID_VERTEILUNGSFORM_THETAQ, OnVerteilungsformThetaq)
ON_COMMAND(ID_VERTEILUNGSFORM_THETAQV, OnVerteilungsformThetaqv)
ON_COMMAND(ID_VERTEILUNGSFORM_THETARQ, OnVerteilungsformThetarq)
ON_COMMAND(ID_DOKUMENTATION_THETARQ, OnDokumentationThetarq)
ON_COMMAND(ID_DOKUMENTATION_THETAQ, OnDokumentationThetaq)
//}}AFX_MSG_MAP
ON_COMMAND(ID_HELP, CWinApp::OnHelp)
END_MESSAGE_MAP()

CTWApp::CTWApp() {}
CTWApp theApp;

BOOL CTWApp::InitInstance()
{
    #ifdef _AFXDLL
    Enable3dControls();
    #else
    Enable3dControlsStatic();
    #endif

    CTWApp::OnProgrammInfo();

    CTWDlg obj;
```

```

        m_pMainWnd = &obj;
        int var = obj.DoModal();

        if (var == IDOK){}
        else if (var == IDCANCEL){}

        return 0;
}

void CTWApp::OnVerteilungsformTheta() { ThetaCMD obj;
    obj.DoModal();}

void CTWApp::OnVerteilungsformThetas() { Theta_SCMD obj;
    obj.DoModal();}

void CTWApp::OnVerteilungsformThetaq() { Theta_QCMD obj;
    obj.DoModal();}

void CTWApp::OnVerteilungsformThetaqv() { Theta_QvCMD obj;
    obj.DoModal();}

void CTWApp::OnVerteilungsformThetarq() { Theta_rQCMD obj;
    obj.DoModal();}

void CTWApp::OnDokumentationThetaq() { doc_Q obj;
    obj.DoModal();}

void CTWApp::OnDokumentationThetarq() { doc_rQ obj;
    obj.DoModal();}

void CTWApp::OnProgrammInfo() { TWInfo obj;
    obj.DoModal();}

void CTWApp::OnProgrammBeenden() { OnSysCommand(SC_CLOSE, 0);}

void CTWApp::OnSysCommand(UINT nID, LPARAM lParam)
{
    if(nID==SC_CLOSE)
    {
        CTWDlg obj;
        obj.DestroyWindow();
    }

    OnSysCommand(nID, lParam);
}

#include "stdafx.h"
#include "TW.h"
#include "TWDlg.h"

#ifdef _DEBUG
#define new DEBUG_NEW
#undef THIS_FILE
static char THIS_FILE[] = __FILE__;
#endif

int i_sw= -1;

class CAboutDlg : public CDialog
{
public:

```

```

CAboutDlg();

//{{AFX_DATA(CAboutDlg)
enum { IDD = IDD_ABOUTBOX };
//}}AFX_DATA

//{{AFX_VIRTUAL(CAboutDlg)
protected:
virtual void DoDataExchange(CDataExchange* pDX);
//}}AFX_VIRTUAL

protected:
//{{AFX_MSG(CAboutDlg)
//}}AFX_MSG
DECLARE_MESSAGE_MAP()
};

CAboutDlg::CAboutDlg() : CDialog(CAboutDlg::IDD)
{
   //{{AFX_DATA_INIT(CAboutDlg)
   //}}AFX_DATA_INIT
}

void CAboutDlg::DoDataExchange(CDataExchange* pDX)
{
    CDialog::DoDataExchange(pDX);
   //{{AFX_DATA_MAP(CAboutDlg)
   //}}AFX_DATA_MAP
}

BEGIN_MESSAGE_MAP(CAboutDlg, CDialog)
   //{{AFX_MSG_MAP(CAboutDlg)
    // No message handlers
   //}}AFX_MSG_MAP
END_MESSAGE_MAP()

CTWDlg::CTWDlg(CWnd* pParent /*=NULL*/)
: CDialog(CTWDlg::IDD, pParent)
{
   //{{AFX_DATA_INIT(CTWDlg)
    // NOTE: the ClassWizard will add member initialization here
   //}}AFX_DATA_INIT
    m_hIcon = AfxGetApp()->LoadIcon(IDR_MAINFRAME);
}

void CTWDlg::DoDataExchange(CDataExchange* pDX)
{
    CDialog::DoDataExchange(pDX);
   //{{AFX_DATA_MAP(CTWDlg)
    // NOTE: the ClassWizard will add DDX and DDV calls here
   //}}AFX_DATA_MAP
}

BEGIN_MESSAGE_MAP(CTWDlg, CDialog)
   //{{AFX_MSG_MAP(CTWDlg)
    ON_WM_SYSCOMMAND()
    ON_WM_PAINT()
    ON_WM_QUERYDRAGICON()
   //}}AFX_MSG_MAP
END_MESSAGE_MAP()

BOOL CTWDlg::OnInitDialog()
{
    CDialog::OnInitDialog();

    ASSERT((IDM_ABOUTBOX & 0xFFF0) == IDM_ABOUTBOX);
    ASSERT(IDM_ABOUTBOX < 0xF000);

    CMenu* zgr = GetSystemMenu(0);
    if (zgr != 0)
    {
        CString obj;
        obj.LoadString(IDS_ABOUTBOX);
        if (!obj.IsEmpty())
        {
            zgr->AppendMenu(MF_SEPARATOR);
            zgr->AppendMenu(MF_STRING, IDM_ABOUTBOX, obj);
        }
    }
}

```

```

        }
    }

    SetIcon(m_hIcon, 1); SetIcon(m_hIcon, 0);    return 1;
}

void CTWDlg::OnSysCommand(UINT nID, LPARAM lParam)
{
    if ((nID & 0xFFFF) == IDM_ABOUTBOX)
    {
        CAboutDlg obj;
        obj.DoModal();
    }
    else { CDialog::OnSysCommand(nID, lParam); }
}

void CTWDlg::OnPaint() { CDialog::OnPaint(); }

HCURSOR CTWDlg::OnQueryDragIcon() { return (HCURSOR) m_hIcon; }

int CTWDlg::Info_sw() { i_sw++; return i_sw; }

```

References

- Schrausser, D. G. (2009). *ThetaWin: Overview*. Academia Software, [81800920](#).
- Schrausser, D. G. (2023a). *Schrausser/ThetaWin: Distribution simulator (v1.0.0)*. Zenodo. [DOI:10.5281/zenodo.7659263](#)
- Schrausser, D. G. (2023b). *Schrausser/ConsoleApp_DistributionFunctions: Console applications for distribution functions (v1.0.0)*. Zenodo. [DOI:10.5281/zenodo.7664141](#)