

Youchao Xue

PERSONAL INFO

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Residency Status: greencard holder

Blog: <https://xueyouchao.github.io>
<http://youchaosdevelopment.blogspot.com/2009/03/few-videos-show-my-editor.html>

WORK EXPERIENCE

Apr 2012 ~ Current

Senior Security Engineer at Primeon Inc. Boston

Performing security code review and vulnerability assessment for top 500 corporations' web and mobile application; developing in-house security analysis tool;

July 2009 ~ Apr 2012

3D Graphics Developer at Weatherford International, Inverness Team, UK

Developing and maintaining the 3D module of flagship software 5D, a directional well planning and survey system that uses 3D visualization for collision avoidance.

Other key contributions: In the project of drilling relief well for Gulf of Mexico accident, I developed a small 3D application to feed real time drilling data into 3D visualization viewer and provide a quaternion based free roaming camera control, used by our senior consultant Angus Jamieson and Houston Team to complete one of the most challenging task in directional drilling area.

Aug 2005 ~ Nov 2006

Software Engineer at Huawei Technologies Co. Ltd., ShenZhen, P.R. China

Joined several telecommunication projects, went through the full life cycle of software development, including project planning, requirements analysis, design, coding, debugging, unit testing, system integration testing and release.

Education

July 2007 ~ May 2009

University of Abertay Dundee, UK - MSc Degree with Distinction in Computer Games Technology

Sep 2001 ~ July 2005

Nanjing University of Aeronautics and Astronautics, China - Bachelor Degree in Information and Computational Science specialized subject

Technical Skills

C/C++98 & C++11

Deep understanding of C/C++ language including object oriented design, c++ template programming, template metaprogramming, multithreading programming, c++11 new memory model for concurrency programming and lock-free programming.

Java & Objective C

Performed Java source code review for several top 500 corporation Java server side projects as well as Android and iOS mobile client side code (or hybrid client using webview such as Cordova). Focused on web/mobile security domain, familiar with major J2EE framework such as Struts2, Spring framework; understanding of Java concurrency model, low level multi-threading messaging library LMax Disruptor.

C# & .net language

Strong skill on c# programming with experience on developing several c# based projects mixed with P/Invoke native functions. Familiar with c# async programming and multithreading programming. Experience on developing projects using c++/cli mixed with native c++ to bring .net UI to native c++ code.

Other languages

Strong interest on concurrency programming; although mainly focus on c++11 concurrency programming, I also developed security analysis tool using Golang based on its CSP model. Knowledge of different concurrency approaches including SIMD, multithreading, functional programming, Actor, CSP, GPGPU etc.

Developing Environment

Emacs on Manjaro Linux and Visual Studio + Visual Assist X on Windows. Currently write c++ project using **Fips**(cmake's python binding) or **GENie**(Lua based premake), the tool helps to generate and compile c++ code base cross multiple compilers and cross different OS platforms including Windows, Linux, OSX, iOS, Android, asm.js/Emscripten(superior web browser solution), PNaCl etc. Familiar with various version control including github, magit(github in emacs), bitbucket, Tortoise SVN, Microsoft Team Foundation Server etc.

Library Used

Strong ability of using STL, BOOST library, two years work experience of Qt, experience of Ogre3D c++ engine, Nvidia Physx Engine, BGFX, ImGui, Raknet, NDK and many more.

Personal Side Projects

3D C++ Game: World of Champloo

Our team with 2 programmers and 3 artists developed this game with split screen version(using XBOX controller) and networking version in less than 2 months in 2008 using OGRE3D for 3D rendering engine, Physx for Physics engine, OpenAL for game audio, CEGUI for ingame GUI, Raknet for UDP networking communication.

3D Game Editor for OGRE3D Engine with .net

My personal side project including the following features:

Visual studio style dockable .net window for rendering multiple 3D scene, editor layout load/save from/to xml files

3D scene, model animations serialization/deserialization to/from XML files
All the properties can be configured through unified .net property grid etc.

Lock Free Ring Queue for Multi-producer, Multi-consumer in c++11

Demonstration of using C++11 to implement high efficient data structure for lock-free programming.

Personal Technical Blog on Github

A technical blog built with Markdown, Hexo on Github pages.

Certifications

CISSP (Certified Information Systems Security Professional)

Resume for download

PDF version

Word version

HTML version

RTF version