个人信息

姓名： 陆国伟

出生日期： 1983

邮箱： bjfubjfu@gmail.com

Github: Link

简介

本人是一位软件开发工程师 ,有十一年的工作经验。希望在 3D 领域找一份适合个人发展的工作或学习机会(3D 重建，计算机视觉，大数据可视化等)。本人熟悉 2D/3D 渲染技术，并在性能调优上有经验积累。目前正在自学数学，计算几何和计算机视觉方面的内容。

工作经验

11/2012 – 现在 **技术负责人**

成都 北京超图-研发中心

负责 Web 虚拟地球引擎技术

- 设计并实现 S3M(Spatial 3D Model)数据规范，支持海量 3D 数据传输，加载和渲染。研究同领域 glTF，3DTiles 和 I3S 等数据规范和渲染调度的设计，优劣对比。
- 优化大数据实时渲染的调度性能，数据&纹理压缩，视锥体裁剪算法，实例化等
- 研究并实现 Web 数据可视化和 GPU 分析，Shader 渲染线形风格等功能
- 研究 HTML5 新特性，实现 Web 二维地图技术升级（Canvas，UTFGrid 等）

07/2006 – 11/2012 **开发工程师&高级开发工程师**

北京 北京超图-研发中心

设计和开发二维地图模块

- 设计并实现了二维渲染引擎（GDI，矢量&图像绘制，反走样等）
- 实现二维专题图（文字注记等）和符号库（铁路线等）模块
- 支持跨平台（Windows，Linux， Android 以及 AIX 等平台）
- 参与 C++编码规范的文档及培训工作
- 团队管理（最多 8 人，包括开发，测试和资料开发等角色）

教育

09/2002 – 07/2006

专业: 信息管理与信息系统

学历: **本科**

学院: 信息学院

学校: 北京林业大学

- 相关课程:
  - 数学: 高等数学, 线性代数，概率，离散数学
  - 计算机: 面向对象程序设计, 数据库, 数据结构, 计算机图形学, 操作系统
- 毕业论文 :《小型数字图像处理软件包开发》 （成绩：良）
- GPA: 8/10

语言

普通话: 母语

英语: 流利(雅思成绩：7.0，C1)

项目

2017 **数据可视化范例集，兴趣，** JS&WebGL

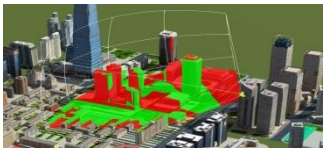
基于 Cesium 库，个人在 github 上创建了数据可视化范例集，实现了一些实用功能和可视化效果，比如支持全球高度图，MapBox 矢量切片以及线形数据可视化效果。右侧范例模拟重庆出租车的高峰期的动态轨迹。

2016 **S3M (Spatial 3D Model)，公司，** WebGL, C++

设计并实现支持海量三维数据分发，渲染的数据规范。支持 BIM，矢量，点云等数据类型以及实例化，属性查询高亮等能力，支持城市级别的数据加载和渲染。右侧为 Chrome 下浏览精模效果，支持多重纹理，材质和水面倒影。

2016 **数据分析和可视化效果，公司，** WebGL, Shader

通过模版和深度缓冲区,浮点纹理等技术 ,在 Shader 中实现数据实时分析和可视化效果，比如通视分析，等高线等功能。右侧为可视域分析效果，基于任意视点实时计算视锥体内的可见区域（绿色可见，红色不可见）



2013 **sunmap，兴趣，** C++, cocos2d-x API

基于 cocos2d-x 引擎 ,在 github 上创建了 sunmap 项目(地图应用),支持 iOS，Android， Windows 和 Mac OS ,支持基本的触摸和鼠标事件 ,多种地图服务(高德，Google Map，OSM) 的加载

成就

团队创新奖

2016 *WebGL 产品获得公司团队创新奖，团队成员 6 名。*

2011 *C++类库移植，地图模块支持 Android，Symbian，获得研发团队创新奖，团队成员 6 名*

2008 *C++类库地图模块功能开发，获得公司团队创新奖，团队成员 8 名。*

2013 **个人贡献奖**

采用 HTML5 技术增强二维地图可视化效果
UTFGrid, vector tile, heatmap, D3.js

2005 **学院创 e 杯** – 二等奖

大三时完成的一个同学录网站，团队成员 3 人

2001 **高中数学联赛**

全国三等奖，山东省一等奖

1998 **110 米跨栏&4*100 米接力**

泰山区中学运动会第一名

技能

- 熟悉: C++, JavaScript，虚拟地球引擎, Cesium，WebGL, OpenGL, HTML5, GDI
- 工作需要: Python, Java, 正则表达式, Shell，Visual Studio, SVN, CMake, OGRE, AGG

兴趣

- Cesium 开源项目**贡献者**，目前贡献排名： 48/141
- 热爱(技术)**写作**，目前微信公众号中有 600+订阅者
- 阅读，编码，旅行与音乐

PERSONAL INFORMATION

Name: Guowei Lu/Peter
Email: bjfubjfu@gmail.com
Github: Link

PROFILE

I have been a technical leader with 11 years working experience. I am intending to find a job in 3D field (e.g. geometry processing, graphics rendering and pattern recognition). I am proficient in graphics 2D/3D programming and have a professional experience in performance optimizations.

PROFESSIONAL EXPERIENCE

11/2012 – Now **Technical Leader**
R&D Department, SuperMap, Chengdu
Responsible for web virtual globe engine

- Designed one data specification for rapidly streaming, distributing and rendering large volumes of 3D content.
- Implemented performance optimizations for real-time massive model rendering in the Browser
- Worked on data visualization and analysis in the Browser
- Implemented Shader Programming for line styles such as dash/arrow line
- Worked on HTML5 new features such as Canvas

07/2006 – 11/2012 **Engineer & Senior Engineer**
R&D Department, SuperMap, Beijing
Participated in building mapping module for map application

- Designed and Provided graphics 2D API
- Worked on symbol library and thematic map
- Supported multi-platform environment e.g. Windows, Linux and Android
- Set C++ style guide
- Managed a team of 8 engineers

* *SuperMap is a GIS software products and services provider and IT enterprise with 3000+ employees*

Education

09/2002 – 07/2006
Major: Information Management & Information System
Degree: **Bachelor**
School: Information Science & Technology
University: Beijing Forestry University (Project 211 list)

- Relevant Courses:
  - Mathematics: Advanced Mathematics(calculus), Discrete Mathematics, Mathematical Statistics, Linear Algebra
  - Computer Science: Object Oriented Programming Language, Database, Data Structure, Computer Graphics, Operating Systems
- Thesis design: 'Development of small digital image processing software package'(grade: B/Good)
- Average grade: 8/10

Languages

Mandarin Chinese: Native speaker
English: Fluent (IELTS Score: 7.0, CEFR Level: C1)

PROJECTS

2017 **Data Visualization Demos, Hobby,** JavaScript, WebGL
I created a demo gallery for Cesium with these practical functions and examples. It supports mapbox vector tile, height map terrain and dynamic data visualization.

2016 **S3M (Spatial 3D Model), Company,** WebGL, C++
I designed a specification for rapidly streaming and distributing large volumes of 3D content. The viewer could view the models at the city level in the browser with many effects such as water reflection.

2016 **Data analysis/visualization, Company,** WebGL, Shader
I applied shader especially stencil buffer and depth buffer to calculate the analytical result for data visualization. Real-time sightline visibility and elevation contour line e.g. (Note: green region is visible and red one is invisible from the viewpoint)

2013 **Sunmap, Hobby,** C++, cocos2d-x API
Using cocos2d-x API I've created a map application for iOS, Android, Windows and Mac OS. It supports basic touch/mouse events, adding custom geometry, selecting map providers and mbtiles for tiles cache.

ACHIEVEMENTS

Innovation Award

2016 *SuperMap iClient 3D for WebGL: a virtual globe engine for web applications. Team of 6.*

2011 *SuperMap iObject for Mobile: a C++ library for mapping application on Android and Symbian. Team of 6.*

2008 *Mapping Module of SuperMap iObject: a C++ library for mapping application on Windows, Linux and UNIX. Team of 8.*

2013 **Individual Contribution Award**
Topic: how to augment map visualization with HTML5
Key Words: UTFGrid, vector tile, heatmap, D3.js

2005 **Innovation E-cup of School** – 2nd Place winner
A *simple website. Team of 3.*

2001 **National High School Mathematics League**
National 3rd prize, provincial 1st prize

1998 **110m hurdles & 4*100m relay**
1st Place winner in the district's sports meeting (more than 15 middle schools)

** Innovation Award is the biggest team award in my company*

SKILLS

- Computer Language
  - Proficient: C++, JavaScript
  - Working knowledge: Python, Java, Regular expressions, Shell
- Technologies/Other
  - Proficient: Virtual Earth, WebGL, OpenGL, HTML5, GDI
  - Working knowledge: Visual Studio, SVN, CMake, OGRE, AGG

INTERESTS & ADDITIONAL INFORMATION

- A **contributor** to Cesium Project, contribution ranking:48/141
- A technical **writer** with 600+ subscribers currently
- Reading, writing, coding, travelling