个人信息

姓名: 陆国伟

出生日期: 1983

邮箱: bjfubjfu@gmail.com

Github: Link

简介

本人有十一年的 GIS 软件开发经验，目前就读于 Utrecht University 的 Game and Media Technology 专业，并打算在图形学领域，特别是光线追踪方向找到一份适合的工作。本人热爱图形学，因为图形学博大精深，充满未知。

教育

09/2018 – 现在

专业: Game and Media Technology

学历: **Master**

学院: Natural Sciences

学校: Utrecht University

- 相关课程:
  - Advanced Graphics, Optimization and Vectorization, Game Physics, Computer Vision, Geometric Algorithm, Motion and Manipulation, Crowd Simulation
- 实习项目: 'Streaming Bidirectional Path Tracing based on Light House 2'
- GPA: 8.8/10

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

工作经验

07/2006 – 08/2018 **工程师**

北京超图-研发中心 成都/北京

负责 Web 虚拟地球和二维地图相关技术

- 数据处理：设计并实现 S3M(Spatial 3D Model)数据规范，支持海量 3D 数据的网络传输，加载和渲染。
- WebGL 渲染: 大数据（地形&模型）实时渲染，可视化效果及性能优化
- 二维地图相关功能以及跨平台技术(Linux, Android 等)

项目

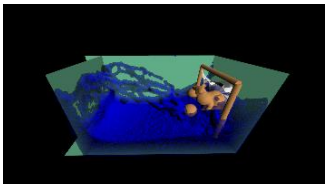
2020

SBDPT，项目， C++，CUDA

基于 Light House 实现的双向路径追踪（Bidirectional Path Tracing）渲染技术，基于 Optix wavefront 渲染管线，支持能量守恒，光蚀(Caustic)等效果。Small Project 作业。

2019 流体模拟，**项目**，C++，Compute shader

基于位置的流体模拟.支持水粒子和刚体，衣服之间的碰撞。Game Physics 大作业。



2019 **行为识别，项目**，Python, Keras，tensorflow

设计一个 CNN 神经网络，训练并识别图片中的人体行为（做饭，汽车，钓鱼等），准确率达到 70%+。支持数据增强，迁移学习等技术。计算机视觉课程大作业。

2017 **Examples for Cesium，兴趣**，JavaScript, WebGL

基于 Cesium 库创建的数据可视化范例集，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 BIM，矢量，点云等数据类型以及实例化，属性查询，倒影等功能。支持城市级别的数据加载和渲染。

成就

2016 **团队创新奖**

WebGL 产品获得公司团队创新奖 团队成员 6 名

2001 **高中数学联赛**

全国三等奖，山东省一等奖

技能

- 语言
  - C++, JavaScript
  - CUDA, Python (keras, tensorflow)
- 其他技术相关
  - Physically Based Rendering, Virtual Earth, WebGL
  - Visual Studio, Visual Code

语言

普通话： 母语

英文： 普通（雅思：7.0）

兴趣/其它

- 对 Cesium 开源项目感兴趣，并做了一些微不足道的贡献，后续也会继续关注
- 喜欢（技术）写作，微信公众号订阅 1500+，有精力时会持续更新
- 读书，写作，编码，音乐和旅行

PERSONAL INFORMATION

Name: Guowei Lu/Peter
Date of Birth: 1983
Email: bjfubjfu@gmail.com
Github: Link

PROFILE

I am a master student at Utrecht University and intending to find a job in computer graphics field, especially about Path Tracing. I have been an engineer with 11 years working experience in China. I like graphics because graphics is everything and everything is awesome.

Education

09/2018 – Now
Major: Game and Media Technology
Degree: **Master**
School: Natural Sciences
University: Utrecht University

- Relevant Courses:
  - Advanced Graphics, Optimization and Vectorization, Game Physics, Computer Vision, Geometric Algorithm, Motion and Manipulation, Crowd Simulation
- Small Project: 'Streaming Bidirectional Path Tracing based on Light House 2'
- Average grade: 8.8/10

09/2002 – 07/2006
Major: Information Management & Information System
Degree: **Bachelor**
School: Information Science & Technology
University: Beijing Forestry University
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)
- Average grade: 8/10

PROFESSIONAL EXPERIENCE

07/2006 – 08/2018 **Engineer**
Research and Development Department, **SuperMap**, Chengdu/Beijing
Responsible for web virtual globe engine and 2D maps production

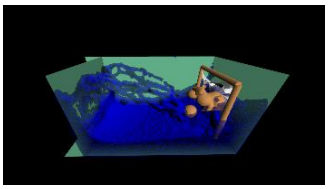
- Data processing: one data specification for rapidly streaming, distributing and rendering large volumes of 3D content
- Rendering (WebGL): optimizations for real-time massive model rendering in the Browser
- 2D Map

PROJECTS

2020 **SBDPT, Project,** C++, CUDA
A BDPT render system based on Light House. It is a streaming bidirectional path tracing, it supports energy conservation, caustic and Optix Prime wavefront pipeline.

2019 **Fluid Simulation, Project,** C++, Compute shader

Position Based Fluid Simulation, the final project of game physics project. It supports the collision among rigid body, clothes and fluid.



2019 **Action Recognition, Project,** Python, Keras, tensorflow

A CNN based on Keras to recognize human action, the final project of computer vision. It supports data augmentation, transfer learning and automatic model search.

2017 **Examples for Cesium, Hobby,** JavaScript, WebGL

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++

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. This work belongs to the company.

ACHIEVEMENTS

2016 **Innovation Award**

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

2001 **National High School Mathematics League**

National 3rd prize, provincial 1st prize

SKILLS

- Computer Language
  - ~~Proficient~~: C++, JavaScript
  - Working knowledge: CUDA, Python (keras, tensorflow)
- Technologies/Other
  - ~~Proficient~~: Physically Based Rendering, Virtual Earth, WebGL
  - Working knowledge: Visual Studio, Visual Code

INTERESTS & ADDITIONAL INFORMATION

- A fan and little contributor of Cesium(An open-source JavaScript library for world-class 3D globes and maps)
- A technical **writer** with 1500+ subscribers from WeChat Official Accounts
- Reading, writing, coding, travelling