GUOWEI (Peter) LU

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PROFILE

I have many years of experience in GIS research and development, and have a strong interest in graphics, mainly related to the fields of physically based rendering, 3D GIS, virtual earth, and differentiable rendering.

EMPLOYMENT

Engineer/Department manager, R&D Department, SuperMap, Beijing/Chengdu, China   Jul. 2006 - Jun. 2018

- Virtual Earth: I am responsible for the development of new WebGL products, including the pre-research of global imaging and terrain, models and other modules, the coordination and cooperation of cross-product teams, I personally realized the generation of massive 3D data (oblique photography, point cloud, BIM), and the (instanced)rendering and dynamic data visualization in the Browser.
- Map Module: I am responsible for the 2D map module, including rendering for vector, raster, and other multi-source data in cross-platform (Windows, Linux, Android, Unix), and the realization of rendering styles such as thematic maps and symbols

EDUCATION

Utrecht University, the Netherlands   Sep. 2018 – Sep.2020

M.Sc. in Computer Science, Game and Media

- Courses: Advanced Graphics, Optimization and Vectorization, Game Physics, Computer Vision, Geometric Algorithm, , Motion and Manipulation, Crowd Simulation
- Master Thesis: 'Gradient-Domain Volume Rendering'(grade: 8.5/10)
- GPA: 8.73/10

Beijing Forestry University, China   Sep. 2002 - Jun. 2006

B.Sc. in Information Management & Information System

PROJECTS

SBDPT • C++, CUDA • 2019
A streaming bidirectional path tracing rendering system. #**Optix**, **wavefront.**

Fluid Simulation • C++, Compute shader • 2019
Position Based Fluid Simulation. #**collision, rigid body, clothes.**

Action Recognition • Python, Keras, tensorflow • 2019
A CNN architecture to classify human actions #**Stanford-40 dataset, data augmentation, transfer learning.**

Cesium tutorial(Chinese) & Demos • JS, WebGL • 2017
Cesium tutorials written in Chinese and a gallery of Cesium demos. #**MapBox vector tile, ESRI height map terrain, dynamic data visualization.**
For all projects, please visit my project portfolio.

ACHIEVEMENTS

Graduation with Cum Laude	2020
Innovation Award (Company, team)	2016/2008
National High School Mathematics League, National 3rd prize, Provincial 1st prize	2001

MISCELLANEOUS

Programming Language	C++, JS, Python, CUDA, WebGL
Oral & Written	English(medium, IELTS 7), Mandarin(Native)
Hobbies	Technical writing, running