Lei ZHANG

Email : lzhan253@asu.edu
Github: https://github.com/lanzhige
Mobile : +1-480-467-8661
Linkedin: https://www.linkedin.com/in/lei-zhang-a95b63148/

Education

- **Zhejiang University, China** — Hangzhou, China
  Bachelor of Science in Computer Science — *Sept. 2012 – July. 2016*
- **Arizona State University, United States** — Arizona, US
  Master of Science in Software Engineering — *Aug. 2017 – May. 2019(expected)*

Honor

- **National Olympic of Informatics Competition** — Hebei, China
  1st Prize — *2011*

Experience

- **VADER Lab** — Arizona State University
  Graduate Research Assistant — *Aug 2017 - present*
  - **Mean Radiant Temperature(MRT) and Physiologically Equivalent Temperature(PET) Calculation**:
    https://github.com/lanzhige/calculateMRT
    - Calculate the sky view factors(SVF).
    - Calculate the MRT and PET values base on SVF, personal body properties, spacial and data status.
    - Find the thermal comfort routing.
  - **Fisheye Data of Street View**:
    https://github.com/lanzhige/fisheye
    - Generate fisheye images using OpenGL based on street view images from Google Map.
    - Get segmented fisheye compressed and calculated.
  - **Ecological Protected Area Data Processing**:
    https://github.com/lanzhige/eco-region
    - Calculate economic values based on the distance to protected areas.
    - Fast process data of 30*30 meter square of the whole US.
- **SeSaMe Lab** — National University of Singapore
  Internship Researcher — *Aug 2016 - Jun 2017*
  - **Trajectory Trend Visualization**:
    https://github.com/lanzhige/serika_trajectory_visualization
    - Implement a trajectory visualization system which deals with queries on the heat map, radar map, trajectories traces, and traffic on intersections and visualization on a website.
    - Develop a front-end using a heat map, radar chart, and rewrite chord diagrams of D3.js to visualize the result.
    - Implement back-end server using CUDA for high speed data processing.
- **CAD&CG National Key Lab** — Zhejiang University, China
  Student Research Assistant — *May 2015 - June 2016*
  - **3D Meteorological Data Visualization System**:
    - An OpenGL based visualization system to display meteorological data(cloud, wind, temperature) in a 3-dimension way like the Google Earth.
    - Debugged through over 100,000 lines of codes.
  - **High-Resolution Meteorological Data Visualization System**:
    - A system for displaying meteorological data on a multi-screen and high-resolution hardware cluster.
    - Solved the synchrony problem among the displays and refactored the meteorological data visualization code.

Course Projects(Others on Git)

- **MIPS Assembler (Fall Semester 2014)**:
  A command line assembler to translate a MIPS-like assembly language to machine codes. It's developed for assembling the following system on an FPGA.
- **FPGA Chinese Character Display System Using Self-designed Instruction Set (Fall Semester 2014)**:
  Self-designed instruction set (imitate the MIPS instruction set) and a logic circuit. Self-designed memory structure and file system. Implemented a system to display Chinese characters. 16 bits are used as the smallest unit just like 8 bits as a byte in a conventional system.

Programming Skills

- **Languages**: C++, C, Java, JavaScript, HTML, CSS, Python, GLSL, CUDA
- **Technologies**: OpenGL, MYSQL and MongoDB, QT, Bootstrap framework, Doxygen, Bugzilla