

WEI JIANG

✉ jiangwei1993@gmail.com • ☎ (+1) 236-882-3457 • 🔗 LinkedIn • 🐙 Github • 🎓 Google-Scholar

Education

University of Victoria

PhD in Computer Science, GPA: 9.0/9.0

Victoria, Canada

September 2018 — Present

Boston University

MS in Computer Science, GPA: 3.8/4.0

Boston, MA

January 2017 — May 2018

Zhejiang University of Technology

BS in Software Engineering

Hangzhou, China

September 2012 — June 2016

Publications

Linearized Multi-Sampling for Differentiable Image Transformation

ICCV 2019 Oral

Wei Jiang, Weiwei Sun, Andrea Tagliasacchi, Eduard Trulls, Kwang Moo Yi

Acceptance rate: 4.3%

- Developed a novel image sampling method for differentiable image transformation in deep neural networks. The sampling method can provide better gradients with respect to the grid coordinates;

Attentive Context Normalization for Robust Permutation-Equivariant Learning

arXiv

Weiwei Sun, Wei Jiang, Eduard Trulls, Andrea Tagliasacchi, Kwang Moo Yi

- A simple yet effective technique to build permutation-equivariant networks robust to outliers. Local and global information are combined to find the essential data points in high-dimensional space;

Depth-aware Image Vectorization and Editing

CGI 2019

Shufang Lu, Wei Jiang, Xuefeng Ding, Craig S. Kaplan, Xiaogang Jin, Fei Gao, Jiazhou Chen

- Developed an image vectorization algorithm that operates on RGBD images and uses both color and depth edges to define vectorized paths. The algorithm can keep the contours of the objects in the scene, thus provide a better image reconstruction;
- Developed the prototype of an object level diffusion curve image editor;

Projects

Lab DevOps

— Server administrator at Visual Computing Group

University of Victoria

October 2018 — Present

- Maintaining the code base of a GPU scheduler, and Compute Canada user tools;

Teaching Assistant

— CSC 305 Introduction to computer graphics

University of Victoria

January 2019 — April 2019

- Prepared tutorial materials, designed and developed the skeleton code in C# with Unity, and delivered the lab;
- Topics including ray tracing, texture mapping, procedural terrain generation, flocking simulation, and more;

Algorithm Development Intern

KATVR

— Motion capture system development

May 2018 — August 2018

- Preprocessed a synthetic dataset, used CycleGAN to add realism to the images, added random background during training. Implemented a variant of FCN in PyTorch to segment human body parts in the depth map;
- Developed a multi-task CNN model to segment human body parts and regress joint locations, implemented a multi-constrain loss function to improve the performance. Trained model has good generalization on real data;
- Developed a pipe based IPC, transport image data from C++ to Python and inferred joint location data from Python back to C++. This architecture achieved real-time inference, and VR game interaction(walk);

Skills

Languages: Python, Processing, C++

Libraries: Numpy, Pytorch, OpenCV, PCL, CGAL, Eigen, GLM, OpenGL

Tools: Git, Docker, AWS, Linux

Contributor: Kornia, VisPy, ATS3D