Pierre Zins

@ zins.pierre@gmail.com +33 (0)6 52 17 50 52
pzins.github.io linkedin.com/in/zinspierre github.com/pzins

EXPERIENCE

INRIA | PhD Student in Computer Vision

Oct 2019 - Apr 2023 Grenoble, France

PhD in collaboration with Meta Reality Labs.
My research focuses on 3D shape reconstruction from images and is divided along three axes:

- 3D reconstruction of dressed humans from a few sparse views by leveraging a neural implicit representation and attention mechanisms.
- 3D reconstruction of shapes from multiple views using an SRDF (Signed Ray Distance Functions) representation.
- Improved implicit shape modeling from a few views by using multi-view constraints.

WRNCH | Software Engineer

Sep 2018 - May 2019 Montreal, Canada

- I have worked on various applications using human pose estimation.
- Multi-cameras platform for 3D markerless motion capture:
  - Cameras calibration
  - Video feed synchronization
  - 3D estimation from several 2D poses (from different angles)

DORSAL | Research Master Student

Jan 2017 - Aug 2018 Montreal, Canada

I have worked on performance analysis tools for machine learning dataflow applications executing in heterogeneous environments.

- Focus on the deep-learning library "TensorFlow" and its dataflow computation graph.
- The goal is to develop tools which will help to understand the performance of the applications and to detect limiting elements or bottlenecks. A main aspect is to insure that the available hardware (CPUs and GPUs) is used efficiently.

ASPIC TECHNOLOGIES | Software Engineer Intern

Sep 2015 - Feb 2016 Tourcoing, France

- Continuous Integration System : Buildbot, Docker, Wakeonlan, Bash.
- C++ Dévelopment for a license system : C++, CMake, Boost, XML, Client-Server.
- Smart C++ tools for memory allocations tagging and monitoring.

PUBLICATIONS

- Zins, Pierre, Yuanlu Xu, et al. (2022). "Multi-View Reconstruction using Signed Ray Distance Functions (SRDF)". in: *arXiv:2209.00082*.
- Zins, Pierre, Yuanlu Xu, et al. (2021). "Data-Driven 3D Reconstruction of Dressed Humans From Sparse Views". In: *International Conference on 3D Vision, 3DV 2021, London, United Kingdom, December 1-3, 2021*.
- Zins, Pierre and Michel Dagenais (2019). "Tracing and Profiling Machine Learning Dataflow Applications on GPU". in: *Int. J. Parallel Program.*

EDUCATION

POLYTECHNIQUE MONTREAL

Master of Applied Science

Jan 2017 - Aug 2018 Montreal, Canada

Computer Science GPA 4.0/4.0

UNIVERSITÉ DE TECHNOLOGIE DE COMPIÈGNE

Engineering Degree in Computer Science

Sep 2012 - Aug 2018 Compiegne, France

TU GRAZ

Exchange Semester

Jan 2014 - Jul 2014 Graz, Austria

Maths and Computer Science in German

LYCÉE HENRI NOMINÉ

Baccalauréat

Sep 2009 - Jun 2012 Sarreguemines, France

Obtained with highest honors

SKILLS

PROGRAMMING

Languages:

Python • C++ • C • Java • C#

Libraries:

Pytorch • Numpy • SciPy • OpenCV • CUDA • OpenCL • SYCL •HIP • Qt

Other:

Unreal Engine • Unity • Blender • Meshlab • CMake• VSCode • Git • Linux • Windows • MacOS

LANGUAGES

- French: Native speaker
- English: Proficient User (C1 level)
- German: Proficient User (C1 level, no practice since 2014)

OTHER

Sport: hiking, trail running, swimming