

Wenqing Qu

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EDUCATION

École Polytechnique, Palaiseau

Sep 2022 – Present

Master of Artificial Intelligence and Advanced Visual Computing

GPA: 3.49/4.00

Major Courses: Machine and Deep Learning, Natural Language Processing, Deep Reinforcement Learning, Computer Vision, Computer Animation

École Polytechnique, Palaiseau

Sep 2019 – Present

Bachelor of Computer Science & Mathematics

GPA: 3.72/4.00

Major Courses: Machine Learning, Computer Programming, Computer Graphics, Numerical Methods

École Polytechnique Fédérale de Lausanne, Lausanne

Sep 2021 – Apr 2022

Exchange Program in Computer Science & Mathematics Bachelor

RESEARCH EXPERIENCE

Diffusion-Based Denoising for Pedestrian Trajectory Prediction

EPFL VITA Lab, Lausanne

May 2024 – Sep 2024

- Developed a diffusion-based denoiser for pedestrian trajectory data to reduce noise in real-world scenarios.
- Extended the application of the denoiser to unseen pedestrian trajectory datasets, showcasing its adaptability beyond the training data.
- Tested the denoiser in trajectory prediction tasks and robot navigation systems, achieving improved accuracy and robustness, particularly in challenging, noisy environments.

Cross-View Geo-localization for Real Estate

Homiwoo, Palaiseau

Jan 2024 – Apr 2024

- Prepared and annotated datasets (CVUSA, CVACT, VIGOR) for model training and evaluation.
- Implemented and fine-tuned models based on Sample4Geo and SAIG architectures.
- Achieved significant performance improvements through data preprocessing and fine-tuning strategies.

Machine Learning in Multi-scale Geomechanics

INRAE, Aix en Provence

Jun 2023 – Sep 2023

- Developed and trained neural networks to replace traditional H-model structures for granular material simulation.
- Generated and preprocessed large datasets, and compared performance using standard tests.

Implicit Surface Modeling using Quaternion/Tensor Fields

École Polytechnique, Palaiseau

Jan 2022 – Apr 2022

- Explored quaternion and tensor fields for anisotropic blending in implicit surface modeling.
- Developed methods for skeleton-based implicit surfaces and demonstrated proof-of-concept for anisotropic blending.

SKILLS LIST

Computer: Python, C++, C

Machine Learning: Scikit-learn, TensorFlow, PyTorch