(+33) (0)7-85-49-51-09
Paris, France
jqzhou.polytechnique@gmail.com

Jianqiang Sky ZHOU

Data / Computer Vision Scientist

Portfolio: jianqiang.sky.zhou.com
github.com/mxz2013
linkedin.com/in/sky-zhou

Physicist with excellent problem-solving, data analysis, communication, and storytelling skills, who takes pride in applying math, statistics, and computer science to solve real-world business problems.

Keywords : Problem-solver, Reliable and Patient, Loyal and Hardworking ,Optimistic and Enthusiastic, Fast-learner, Story-teller

Skills

Tools and Languages	Python, Git, LaTeX, Fortran, Linux Bash
Computer Vision	OpenCV, Machine/Deep Learning
Computer Networking	TCP/IP protocols, Rsync, SSH, FTP, Linux Services, Socket Broadcasting
Communication	Chinese, English, French

Technical Experience

Senior Solution Scientist **06 2021 — Present**
Flyinstinct *Paris, France*

- Designed an algorithm for minimizing the luminosity difference in the overlap region of two images.
- Introduced a deep learning solution (Mask-RCNN) for reducing 70% of the false positives.

Solution Scientist **06 2020 — 05 2021**
Flyinstinct *Paris, France*

- Proof of concept: Design new algorithms based on computer vision technique. Implement them in Python, and prove their performance in our industrial products.
- Data analysis: Extract information from images, analyze them according to the requirement of the products, which helps to design better algorithms.
- Software team lead: explain and discuss daily tasks and distribute daily work. Provide the best direction to go for product development based on team members' ability.
- Pipeline performance evaluation : Study the performance of the entire pipeline. Design in-house experiment for evaluating potential problems or bugs.

Post-doctoral Fellow **02 2018 — 04 2020**
Sorbonne Université, Institut des Nanosciences de Paris *Paris, France*

- Applied a machine-learning type approach (minimize the gradients of the energy using conjugate gradient or steepest descent algorithm) to compute physical concepts.

keywords : Numerical simulation, High-performance computing (HPC), Fortran, Python, MPI/OpenMP, scientific publications.

Post-doctoral Fellow **07 2016 — 01 2018**
Laboratoire des Solides Irradiés, École Polytechnique. *Palaiseau, France*

- Developed mathematical methods and implemented it in a software (in Python) for bleeding-edge numerical simulations, leading to several top-tier peer-reviewed publications.

keywords : Mathematical derivations, python, experimental design, conference presentation and organization, scientific publications.

Education

Ph.D. in Theoretical Physics, *École Polytechnique, France* 06 2016
Master of Molecular Nano- and Biophotonics for telecommunications and biotechnologies (MONABIPHOT), *École Normale Supérieure de Cachan, France* 07 2012
B.Sc. in Optoelectronic Engineering, *Harbin institute of technology, China* 07 2019
Erasmus Mundus Scholarship 2010 — 2012

Invited seminars

Photoemission spectroscopy from first principles invited by the materials and nanosciences research department of the institute of physics,Rrennes-I university 09 2019
Photoemission spectroscopy from first principles invited by mini-workshop "REST in Paris" 12 2017
Challenges for the cumulant approach in valence photoemission of metals invited by CECAM workshop: Green's function methods: The next generation III 06 2017