NINGKUN ZHOU

Email: nkzhou26@gmail.com
Telephone: +8615010459923
Github: https://github.com/nzhou26
Estimated time arrival in UK: Late August 2024 on HPI visa

SUMMARY

Machine Learning Engineer with 5 Years of experience in Computer Vision and Biomedical Imaging. Served 5+ world-leading steel producers, achieving 95% system accuracy with 100% project acceptance rate. Expertise in integrating computer vision tasks into surveillance systems, specializing in fully automatic PTZ (pan-tilt-zoom) camera systems. Interested in implementing advanced techniques such as zero-shot classification and NLP-assisted computer vision for industrial production. Authorized to work under High Potential Individual Visa.

WORK EXPERIENCE

Danieli China
Algorithm Engineer 2022-present

- Developed an auto-adaptive PTZ camera image acquisition system from scratch using object-detection and cross-correlation
- Introduced CLIP-base zero-shot image classification to reduce annotation workload by 50%
- Implemented and fine-tuned popular deep learning architectures to production level
- Worked closely with customers and optimized the classification system to reach a 90% to 95% accuracy
- Integrated machine learning algorithms based on multiple widely used frameworks

Chinese Academy of Sciences, GIBH
Research Assistant 2019-2022

- Applied non-supervised reconstruction algorithm to solve protein atomic-level structure using cryogenic electron microscopy
- Utilized deep learning technology in data processing pipeline automation and data quality improvement
- Published two scientific papers on international reputable journals

EDUCATION

University of Wisconsin, Madison 2015-2019

- Bachelor of Science in Genetics and Genomics
- Certificate in Computer Science
- Intern at Amazon China Ads team

SKILLS

- **Machine Leaning**: EfficientNet, U-Net, Mask R-CNN, YOLO, K-means clustering, CLIP
- **Programming**: Python (Tensorfow, Pytorch, Detectron2, Numpy, Pandas, Matplotlib), SQL, Bash
- **Miscellaneous**: Linux, Docker, Redis, Rabbitmq, RESTful API, PLC, Socket
- **Specialization**: Integration of machine learning algorithm in PTZ camera

PUBLICATIONS

- Structural basis of nucleosome deacetylation and DNA linker tightening by Rpd3S histone deacetylase complex. Cell Research, 2023.
- Vibrio parahaemolyticus prey targeting requires autoproteolysis-triggered dimerization of the type VI secretion system effector RhsP. Cell Reports, 2022.