PEIQI YU

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EDUCATION

Tsinghua University **2019 - 2023**
B.E. in Automation
GPA: 3.81
Major Courses: Fundamentals of Artificial Intelligence, Digital Image Processing, Numerical Analysis, Statistics, Data Structure, Stochastic Mathematics, Signal and System, Computer Network

TECHNICAL SKILLS

Languages	**(Ranked in the order of familiarity) Python, Matlab, C++, C**
Libraries	**PyTorch, Numpy, Pandas, Matplotlib GPytorch, Botorch, Sci-kit learn**
Utilities	**VSCode, Office, LaTeX**

ACHIEVEMENTS

Academic excellence award **2019-2020**
Huang Yicong scholarship
Social practice excellence Award **2019-2020**
Qu YuZhi scholarship
Science&technology excellence Award **2020-2021**
School Management scholarship

PUBLICATIONS

Recovering Realistic Details for Magnification Arbitrary Image Super-Resolution **2022**
IEEE Transactions on Image Processing
Cheng Ma, Peiqi Yu, Jiwen Lu and Jie Zhou

- Programmed and implemented deep learning algorithms to achieve a SOTA infinite image super-resolution model.
- Conducted experiments on datasets and analyzed results between existing models and our proposed method.

SELECTED RESEARCH EXPERIENCE

Bachelor's Project **2022 - 2023**
Transformer-based Bayesian Optimization
Supervisors: Professor Yilin Mo, Department of Automation, Tsinghua University
Professor Yanan Sui, School of Aerospace Engineering, Tsinghua University

- Independently developing algorithms based on Transformer to perform Bayesian Optimization.
- Mathematically deducting analysis of physical properties of Bayesian Optimization and implementing them in codes.
- Implementing SOTA models and improving the performance on few-shot learning by 80%.

Research Intern **2022**
Learning From the Wild: Video-based Robot Control System
Supervisors: Professor Dorsa Sadigh, Department of Computer Science, Stanford University
Professor Yanan Sui, School of Aerospace Engineering, Tsinghua University

- Developed deep RL algorithms for guiding virtual robots to learn human behavior from wild videos and mimic human actions.
- Developed similarity calculation module for video processing.
- Conducted analysis and compare the results with DVD, C3D models.

Research Intern **2022 - 2023**
Deep-learning Based Accurate Prediction of Pharmaceutical Properties
Supervisor: Dr Jie Li, Bo Li, Minzhen Yi, Dr Xingyu Shen, QuanMol Tech

- Improving the training pipeline of existing DL algorithms and designing loss functions based on our data.
- Developing both GPU-based and CPU-based api to realize front-end and back-end interactions.
- Developing algorithms for molecular graph recognition.

Summer Intern in Algorithms **2021**
Sleep Staging Algorithm Based on Wearable Signal
Supervisor: Tianyu Feng, Beijing Academy of Blockchain and Edge Computing

- Analyzed data collected by smartwatches (including heart rate, body temperature, and motion signal).
- Developed sleep-staging algorithms based on collected data.