Kaiwen Xue

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Education

- **University of Electronic Science and Technology of China** — Sichuan, China
  Bachelor of Engineering - Software Engineering; GPA: 3.98/4.00 — *Sep 2019 - now*
  Courses: *Data Structures(99), Probability Theory(95), statistical learning methods, Stanford CS231n: Deep learning for Computer Vision, Stanford CS236: Deep Generative model*

Skills Summary

- **Languages**: Python, C++, SQL, Bash, HTML
- **Frameworks**: Scikit, Pytorch, QT
- **Tools**: Docker, GIT, PostgreSQL, MySQL, SQLite
- **Platforms**: Linux, Web, Windows, Raspberry, Alibaba Cloud
- **Soft Skills**: Leadership, Event Management, Writing, Time Management

Research Experience

- **University of Electronic Science and Technology of China** — Offline
  Research Intern (Full-time) — *Dec 2021 - now*
  - **Prior-DiffuSE**: Revealed the difficulties in directly applying existing conditional diffusion models to the field of speech enhancement and proposed Prior-DiffuSE, a simple and effective framework for speech enhancement using conditional diffusion models.
- **University of Chinese Academy of Sciences (Sci-Tech Program)** — Online
  Research Intern (Part-time, Contractual) — *May 2021 - Dec 2021*
  - **Crowded pedestrian detection algorithm with lidar point clouds**: Developed a Paired-Box Model which simultaneously predict the full and visible boxes of a pedestrian and built network with attention blocks(point level). Experiments on KITTI dataset validate the effectiveness of the proposed approach.

Projects

- **Intelligent child monitoring system based on deep learning (Computer Vision, Back-end Development, Web Crawlers, Multimedia Processing)**: open source application with realize visual data displaying and accurate detection of children's status. Tech: Pytorch, Android, Selenium, Sql, raspberry Pi, OpenCV
- **CNN-based deep-earth object detection algorithm (Image Processing, Data Preprocess)**: Provided a optimal pipeline of Deep-earth object detection tasks such as fault and salthills recognition which consists of data preprocess and CNN-based model, effectively improved detection accuracy. Tech: Python, Tensorflow
- **Contemporary Undergraduate Mathematical Contest in Modeling (Optimization Models, Probabilistic Models, Dynamic Models)**: Systems using mathematical concepts and language. Tech: Python, Matlab
- **Reciter: A simple software to assist in memorizing words (Front-end Development, Software Architecture Design)**: A simple software to assist in memorizing words using Qt, a cross-platform C++ desktop application framework. Tech: QT, MySQL, C++

Honors and Awards

- National Award Scholarship, Ministry of Education - December, 2021
- Scholarship for Outstanding Students, UESTC - December, 2021
- First Prize of Contemporary Undergraduate Mathematical Contest in Modeling(Sichuan Region), China Society for Industrial and Applied Mathematics - December, 2021
- National Award Scholarship, Ministry of Education - December, 2020
- Scholarship for Outstanding Students, UESTC - December, 2020
- Outstanding Youth League Member, UESTC - December, 2020