Ruiqing Tang

(+86)18810068983 | tangruiqing123@gamil.com | Xueyuan Road, Haidian District, Beijing, China |
https://ruiqingtang.github.io/

Education

Master in Communication Engineering	2023.09 - Present
University of Science and Technology, Beijing	Beijing, China
Bachelor in Communication Engineering	2019.09 - 2023.06
University of Science and Technology, Beijing	Beijing, China

Work Experience

AI Engineer Internship (python, docker) 2024.05 - 2024.12
CubeVi Beijing, China

- Researched and reproduced state-of-the-art 3D reconstruction techniques (e.g., BAD-Gaussians, InstantSplat) and Human Mesh Recovery (HMR) algorithms (e.g., SMPLer-X), and deployed them into product applications using Docker;
- Researched and replicated cutting-edge Text-to-Speech (TTS) techniques (e.g., Chat-TTS, GPT-SoVITS) and Singing Voice Conversion (SVC) algorithms (e.g., RVC, seed-VC), crawled audio data for various characters, retrained models for each character, and optimized inference speed by converting models to ONNX format;
- Developed a digital desktop pet application, integrating TTS, SVC, text-to-motion (flowmdm), and LLM Role Play(SFT, Prompts, RAG) functionalities.

Projects and Research

SRTP (Student Research Training Program) (python, tensorflow) 2020.12 - 2021.12
Reinforcement Learning-Based Power Allocation and Trajectory Optimization for UAVs.

- Studied channel modeling for UAVs and explored communication protocols between UAVs, base stations, and ground terminals;
- Acquired foundational theoretical knowledge of reinforcement learning and applied the DPPO algorithm to optimize power allocation and trajectory planning for UAVs;

Oil and Gas Well Pipeline Flow Monitoring (python, pytorch) 2024.06 - Present
Research Focus: Integration of Distributed Acoustic Sensing (DAS) and AI, DAS data denoise.

- Data Collection Using DAS and Noise Reduction Processing to Obtain Dataset;
- Designed an innovative lightweight neural network architecture integrating CBAM (Convolutional Block Attention Module) and DSC (Depthwise Separable Convolution) for accurate flow rate prediction.

3D Playmate (python, Shell, C++, Javascript, TypeScript, Blender) 2025.02 - Present
Personal Development Projects, Pursued Out of Interest

- Conducted secondary development on LODGE, converting SMPL parameters into VMD animations and rendering them using the Three.js framework;
- Future plans include integrating LLM, Text2Motion, TTS, SVC, and storyline design.
- Demo presentation on different platforms: youtube, rednote, bilibili.

Academic

- Authored and published a patent (granted) based on SRTP.
- Achievements: One patent application filed and one SCI Q1 journal (JOURNAL OF LIGHTWAVE TECHNOLOGY) paper under review (Oil and Gas Well Pipeline Flow Monitoring Project).

Skills

- Languages: Python, C++, Shell
- Framework and libraries: Pytorch, Tensorflow, Scikit-learn, OpenCV, XGBoost, Blender, Unity, UE.