Ruiqing Tang

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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 - 2025.04
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;
- Developed animation data conversion toolchains (SMPL⇌FBX/VMD/BVH) with cross-engine compatibility (Babylon, Unity, Blender, Unreal Engine), with SMPL2VMD latency reduced to just 400 ms for long-sequence animations (over 3 minutes);
- 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; GPT-SoVITS achieved ~1:6 latency (1s synthesis for 6s audio), while RVC voice separation and timbre conversion completed in under 1 minute;
- Developed a digital desktop pet application, integrating TTS, SVC, text-to-motion (flowmdm), and LLM Role Play(Utilized deepseek for data generation and conducted full fine-tuning of ChatGLM-9B and LLaMA3.1-8B) functionalities;
- Researched AI Agents for social NPC applications, implementing multi-user chatrooms with probability/rule-based behavior control.

Projects and Research

SRTP (Student Research Training Program) (python, tensorflow) 2020.12 - 2021.12

- 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;

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;
- Designed structured prompts (character profile, backstory, dialogue, skill attributes, and response constraints) to enable immersive Role Play;
- Demo presentation on different platforms: youtube, rednote, bilibili.

Academic & Reward

- 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;
- Second Prize, 4th Huawei Cloud Wireless Big Data Competition.

Skills

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