

Xuhui(Eric) Sun

<https://www.xuhuisun.com>
eric.sun1995@gmail.com | (805)886-1830

EDUCATION

UNIVERSITY OF CALIFORNIA, SANTA BARBARA

BS IN COMPUTER SCIENCE

June 2018 | Santa Barbara, CA

College of Engineering

Dean's Honors

LINKS

Github:// [XuhuiSun95](#)

LinkedIn:// [XuhuiSun](#)

Personal Blog:// [XuhuiSun](#)

INTERESTS

AREA

Artificial Intelligence

Parallel Computing

Computer Security

Distributed Systems

Computer Graphics

Cryptography

SKILLS

PROGRAMMING

Favorite & Loved:

• C++/C • CUDA • Python

• Markdown • Mermaid

Database:

• SQL • NoSQL • Object Storage

Others:

• REST • RPC • Message Queue

• API Gateway • Reverse Proxy

• Parallel • Async

• Micro service Architecture

• Event Sourcing • CQRS

SYSTEM & TOOLS

• Linux • Bash • Git • Code Review

• Testing • Code Coverage

• Docker • Kubernetes • Helm

• CI/CD • Cloud Service Provider

• Agile • Scrum • Kanban

STRENGTHS

• Ambitious • Curious

• Teamwork • Analytical

• Passion for learning and sharing

LANGUAGES

Chinese: native

English: fluency in writing, reading, speaking

EXPERIENCE

REMARK HOLDINGS | SENIOR SOFTWARE ENGINEER

October 2018 – Present | Las Vegas, NV

- Safety Space Project Platform
 - Design, develop, provide the architectural blueprints and technical leadership in the Safety Space Project platform.
 - Platform design and development with scalability and high availability, provide as an in-premise or cloud-ready solution.
 - The platform provides video analytic(facial recognition, facial feature analysis, pose analysis, pedestrian feature analysis, and more), real-time calculation, detection and notification, camera live streaming, collected data analysis, and so on.
 - In-house API Gateway group, Auth Server, and IAM server provide distributed authorization and authentication control over the entire platform.
 - Persistent database storage and in GPU VRAM data synchronization, utilize the GPU accelerated computing on real-time facial recognition.
 - Promote and execute newer version Python and C++ project templates to improve overall code quality, readability, and maintainability across the group.
 - FastAPI, MinIO, Redis, MongoDB, Traefik, Gunicorn, Kafka, gRPC, WebSocket, GraphQL, JWT, CUDA, DeepStream, Jaeger, Prometheus, ELK Stack, Docker, Kubernetes, Helm, GitlabCI
- rPad Management Platform (**Remark AI Self Check-in rPad**)
 - Design, develop, provide the architectural blueprints and technical leadership in the rPad Management platform.
 - Promote and execute the CI/CD staging pipeline with Gitlab CI.
 - Flask, SocketIO, MinIO, Redis, MySQL, Traefik, Celery, Gunicorn, Docker, Swarm, GitlabCI
- Thermal Kit (**Remark AI Thermal Kit TK-1**)
 - Stand-alone camera streaming, facial and thermal detection, alert notification solution.
 - Python backend handle database and other business operation, provide REST API for frontend and internal application.
 - C++ application process camera data and upload detected facial, background image if over the thermal threshold.
 - Flask, WebSocket, MySQL, Redis, MinIO, FFmpeg, Nginx, Gunicorn, Docker
- Library Interface, High Performance Computing
 - Initiative and develop the first prototype of a custom build NVIDIA Deepstream SDK to replace the current pipeline. Solve the existing redundant image buffer copy and high VRAM usage bottleneck in the existing pipeline.
 - Video Decode SDK(dynamic library) GPU accelerated video decoding and transcoding SDK based on NVIDIA Video Codec with custom modification to meet the company's needs.
 - Software Licensing SDK(dynamic library) provides license file generation, validation checking, AI model file encryption, and decryption.
 - High-performance, high-parallel IPC RTSP stream decoding, and transcoding RPC invoke platform.
 - CUDA, DeepStream, Video Codec, FFmpeg