Xin Tang

Monterey Park, CA 91755 | (626) 215-6626 | tangxin531@gmail.com | Portfolio | LinkedIn

EDUCATION

Master of Software Engineering (MSWE) | University of California, Irvine | Expected Dec 2025
Ph.D. in Biomedical Engineering | Tongji University, Shanghai, China | July 2016

TECHNICAL SKILLS

- **Languages:** C++, Java, C#, Python, SQL, JavaScript, TypeScript
- **Web/Frameworks:** HTML, CSS, Node.js, React, Firebase (Firestore)
- **Data Science/ML:** PyTorch, Scikit-learn, Pandas, OpenCV
- **Tools:** Git, Docker, MySQL, Zookeeper, Protobuf, Visual Studio, IntelliJ

PROJECTS

Hypertension Educational Tool | *Winner – American Heart Association (AHA) Educational Tools Contest 2025, Irvine, CA*
React, TypeScript, Firebase, Firestore | Portfolio
- Developed a full-stack educational platform for medical professionals with interactive decision trees and disease compendiums
- Implemented Firebase backend with authentication, offline capabilities, and real-time data synchronization
- Integrated medical imaging and reference citations for an intuitive healthcare learning experience

AI-Powered Pathology Classification for Lymph Node Metastasis | *Summer Research, Irvine, CA*
PyTorch, ResNet-50, Scikit-learn | Portfolio
- Engineered a hybrid AI pipeline to classify pathology images from a limited dataset (38 images), addressing data scarcity challenges
- Pre-trained ResNet-50 on 100k-image NCT-CRC dataset, achieving 99.5% validation accuracy as a feature extractor
- Achieved Mean AUC of 0.852 using Logistic Regression on 2048-dimensional feature vectors, a 49% improvement over baseline

Distributed RPC Service Registration & Invocation System | *C++*
Zookeeper, Protobuf, Muduo Reactor
- Built distributed RPC framework with service registration, discovery, and remote invocation using custom protocol
- Designed transport protocol solving TCP fragmentation with Protobuf serialization and Zookeeper-based registry
- Developed high-concurrency network layer with Muduo Reactor pattern, decoupling I/O from RPC logic

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PROFESSIONAL EXPERIENCE

Research Associate – Dermatology | USC Keck School of Medicine, Los Angeles, CA | *Nov 2017 – Feb 2023*
- Automated cell migration detection in microscopic images using C# and OpenCV, eliminating manual annotation
- Reduced analysis time by 70% and improved accuracy by 50% with advanced image processing and registration techniques
- Supervised Ph.D. candidates and assisted with grant writing, emphasizing project management and interdisciplinary collaboration