Yuliang Peng

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Programming Languages: Python, C++, Java, Dart, C, JavaScript, Unix, Dart, SQL, HTML, CSS
Tools/Frameworks: Spring Boot, Vue.js, React, NumPy, Pandas, Flutter, Flask, Git
Language: English (Fluent), Chinese (Native), Japanese (Native, N1)

EDUCATION

University of Maryland, College Park **Graduated at May 2024**
- Bachelor of Science in Computer Science GPA: 3.7/4.0 (Deans' List)
- Courses: Data Structure and Algorithms, Computer Systems, Computer Vision, Data Science, Statistics

WORK EXPERIENCE

Bank of China, USA **Los Angeles, USA**
IT Engineer Intern July 2024 - Present
- Managed **IT infrastructure,** including cloud-based backup systems, network security**,** and technical support**.**
- Enhanced access control system by migrating key, card, domain, and drive file components online and implementing **Role-Based Access Control (RBAC)**, which improved scalability and reduced manual management tasks by **30%**.

AllPeople **Remote, USA**
Software Engineer Intern January 2024 - May 2024
- Enhanced backend functionality for high-traffic Shopify e-commerce sites using **Liquid** programming and **microservices** architecture, reducing loading times by **20%** through code optimization, database indexing.
- Performed **Extract, transform, and load (ETL)** to turn massive user data into actionable business insights via data visualization, conducted sentiment analysis, and identified key trends in users' comments
- Optimized service performance by streamlining dynamic content delivery and improving **UX/UI** design, leading to a **23%** improvement in user satisfaction rate conducted via user questionnaire

Air China **Chengdu, China**
Software Engineer Intern May 2023 - August 2023
- Developed a **production-level** internal communication and attendance-management application using **Spring Boot**.
- Revamped the **secure login system** with **mobile QR code scanning**, streamlining user identification. (adopted in 2024)
- Enhanced the office automation system by adding a TO-DO list feature and an online mobile training system
- Leveraged **Python**'s **machine learning** capabilities to optimize passenger boarding locations by analyzing flight maps and air traffic at Chongqing International Airport, improving on-time performance by **0.02%**.
- Built an **automated tool** to transcribe flight delay information and dispatch documented data to the Beijing Headquarter for review, reducing operational overhead by **12** hours per week

China Railway Group Limited (LuBan E-Commerce Technology Co. Ltd) **Remote, China**
Software Engineer Intern June 2020 - February 2021
- Designed and developed an entire **server-side** internal social media website with **Vue.js**, **Firebase**, **SQL**, and **JavaScript**
- Developed a scalable video streaming platform on **Alibaba Cloud** (OSS, CDN, Lambda) for over 200 employees, achieving **80%** positive user feedback on streaming quality and accessibility.
- Built a film **recommendation system** using **cosine similarity** for user-item similarity scoring and **data vectorization** for feature extraction. Optimized algorithm efficiency through **hyperparameter** tuning and **feature weighting**, resulting in a **35**% improvement in content relevance and user satisfaction.

PROJECTS

Cross-Platform Software Development | Game | Github Code
- Released a Pokémon Go-like AR app for **iOS** and **Android**, utilizing **Flutter**. The app features GPS mapping, real-time Redis data storage, in-app notifications, and sensor input via accelerometers.
- Implemented secure server functionality with **HTTPS and JWT** to ensure user authentication and data privacy,
- Enhanced backend performance by introducing **Redis** caching to decrease data retrieval times by **40**%
- Optimized app performance by implementing efficient state management with **Provider** and **lazy loading**. Reduced frame rendering time and minimized memory usage, leading to a **30%** improvement in reloading speed.

Depth Prediction from Tactile Images | Computer Vision | Github Code
- Developed a method for estimating 3D depth from 2D tactile images using image subtraction, Sobel operators for **depth gradient** calculation, and **K-D Tree** mapping for efficient depth-color correlation.
- Implemented feature extraction and depth reconstruction using **CNNs**, **gradient-based edge detection**, **gradient surfing**, and **artifact clipping**, resulting in improved precision and achieving **73.7%** accuracy in depth mapping.
- Optimized computational efficiency by combining **traditional edge detection** with **feature refinement** and **parallel processing**, reducing processing time while maintaining high accuracy in real-time 3D depth estimation.