Jianlin Xu

Senior Software Engineer

I'm Piasy (Jianlin Xu), a fullstack hacker, open source fan, and knowledge sharer. My development experiences cover Android, iOS, Windows, TX2, and backend, and I'm focusing on RTC technology currently, both client side and server side. I have 1.9K followers on GitHub, and projects with about 10K stars in total. I gave many talks on technical conferences, including a good model & network layer architecture in Android application on GDG Beijing meetup, and RxJava on Droidcon Beijing, 2016. I graduated from the best University in China, Tsinghua University, majored in CS. My book, which is the first technical book in the world explaining details inside WebRTC and WebRTC development on native platforms, is publishing. My dev blog is https://blog.piasy.com/, and my GitHub profile is https://github.com/Piasy/.

Skill

RTC development
3 years of experience dedicated to RTC SDK development, mainly on Android, also on iOS, Windows, TX2 and backend; audio capture & playback, video capture & render, audio & video encode & decode, FFmpeg, WebRTC, OWT, performance tuning; multiplatform, J2ObjC, Kotlin Multiplatform.

Android development
2 years of experience dedicated to App development, with practice about architecture, TDD, reactive programming(I'm RxJava fan), RESTful API call, local data management, custom view and interaction, and performance tuning.

Project management
1 year of experience in project management, including task scheduling, team member collaborating, improving workflow, CI and CD, code quality, code review and progressive refactoring.

Backend development
2 years of experience in building RESTful API server, TDD and database design. I'v built two RESTful API servers with Beego framework, storing data in MongoDB and MySQL database, and one RTC signaling server with Flask + Redis, all deployed at Aliyun cloud.

Tech stack

RTC	★★★★☆	Objective-C	★★★☆☆
Android	★★★★☆	Python	★★★☆☆
Java	★★★★☆	Golang	★★☆☆☆
C/C++	★★★☆☆	Javascript	★★☆☆☆
Kotlin	★★★☆☆	Lua	★★☆☆☆
Flutter	★★☆☆☆	Any programming language	I can get hands on quickly

Experience

2017.02 - now   *Senior Software Engineer*, PowerInfo

Rewrote RTC streaming module of Android, including all architecture design and functionality implementation; optimized video encoding, latency reduced by 10%; optimized audio capture and playback, latency reduced by 50%;

Unified the API and core control logic of RTC streaming module of all platforms (Android, iOS, Windows, TX2), with C++ (work in progress); reused logic code were in proportion of ~20% in the code base; all APIs and functionalities were unified, development efficiency was improved significantly;

Developed iLive multi-party conference SDK from scratch, including Android, iOS, Windows and signaling server, including all architecture design and functionality implementation; led the team of 6 people for maintenance of this SDK;

Conducted research and commercializing on new platforms and new technologies;

Keywords: RTC, MediaCodec, OpenGL ES, performance tuning, multiplatform, to B, innovation

2015.05 - 2017.02 *Android R&D Engineer*, Beijing Youluoshidai Technology Co.,Ltd. (Startup)

Developed the company App Android client from scratch, YOLO, a mobile live streaming App, including all architecture design and functionality implementation; led the Android team of 3 people;

Conducted refactoring the essential part of Android project several times, App's UI respond speed increased by 30%, and development efficiency was improved significantly;

Participated the whole project from scratch, including prototyping, Android client architecture design and improvement, backend architecture improvement, and evolvement of the whole company;

Keep improving my knowledge on Android platform, and become a fan of open source, innovation, and knowledge sharing; giving a public talk about Android model layer architecture at GDG Android Meetup, and a talk about RxJava at Droidcon Beijing;

Learned about procedure of backend API development and deployment;

Keywords: Network layer architecture, Model layer architecture, RxJava, YaMvp, IM integration, Camera capture, Audio capture and playback, TDD, OkBuck, AndroidTDDBootStrap, Understand great libraries, Entrepreneurship is hard

2014.10 - 2015.03 *Android R&D Internship*, XueBa(Beijing) technology development Co., LTD (Startup)

Developed the Android client of college student social App: Young, as part of a team of 3;

Conducted Android automated UI testing from scratch (using Espresso test kit), manual test time reduced by 70%;

It was my first time attending production project, the moving fast style meets my pursuing of technical skill very well; I also learned about how startup works;

Dependency injection, reactive programming, and RESTful API… all those modern developing ways caught me up;

Keywords: automated testing, reactive programming, dependency injection, RESTful API, agile development, moving fast

Personal Project

AvConf (Open source soon), 2018.08 - now: A realtime multi-party video call SDK based on WebRTC, it utilizes Kotlin Multiplatform to reuse business logic on multiple platforms. It supports OWT server now, but it's easy to add support for other SFU/MCU server.

WebRTC Native 开发实战 (Publishing), 2019.01 - 2020.08: The first technical book explaining details inside WebRTC and WebRTC development on native platforms in the world.

BigImageViewer, 2016.11 - now: Big image viewer supporting pan and zoom, with very little memory usage and full featured image loading choices. Powered by Subsampling Scale Image View, Fresco, Glide, and Picasso.

AdvancedRxJava, 2016.05 - 2017.06: The Chinese translation of blog series Advanced Reactive Java http://akarnokd.blogspot.com/, including 46 posts. It takes 13 months.

OkBuck, 2015.10 - 2016.09: A Gradle plugin, help Android developers to utilize the super fast build system BUCK with several lines configuration. It has been transferred to Uber at Sep. 2016.

Education

2011.08 - 2015.07 *Tsinghua University, Bachelor degree on Computer Science*

2nd freshman award of 2011 grade, rewarding the top 10 student of each province in the College Entrance Exam; attending courses including Data structure, Design pattern, Computer Network, Operating System, Introduction to Search Engine, Service Oriented Archtecture, etc. GPA is 92.1 in 100, top 9 students in 129; doing research in lab about mobile App sucurity analyse and mobile cloud storage optimization, publishing one paper on Tsinghua Science and Technology, with 22 citations by middle 2016.