
EDUCATION

- **Institute of High Energy Physics, University of Chinese Academy of Science** Beijing
M.Eng in Computer Science; Sep. 2010 – Jun. 2014
- **Southwest Jiaotong University** Chengdu
B.S in Software Engineering; Sep. 2006 – Jun. 2010

PROGRAMMING SKILLS

- **Languages:** C++, Objective-C, Swift, Python, JS
- **Technologies:** Video/Audio Process, ML/DL Engineering, iOS App Development
- **Platform & Toolkit:** OpenCV, FFmpeg, Torch, Tensorflow, AWS, Mysql, Redis

EXPERIENCE

- **Alibaba** Guangzhou
Staff Software Engineer 2020 - Present
Senior Software Engineer 2017 - 2020
Software Engineer II 2016 - 2017
 - **News Feeds:** News feeds, especially video feeds is the most important part in UC which contribute more than 50% DAUs. I managed the mobile development team and built the whole video feeds with competitive QOE/QOS from scratch. Designed series considered strategies which make our business could keep reasonable cost while user scale rapidly growing
 - **Video Record/Edit/Transcode SDK :** Built a cross-platform video process framework in C++, based on FFmpeg. The framework is able to easily read from multi-type input(camera/image/video) by multi-type codec(software codec/ios,android hw codec), then add multi-type effect(GPU/CPU) and generate multi-type output(screen/video/image/livecast)
 - **uPipe: Realtime ML Pipeline Framework:** Derived from Google's mediapipe framework, which provides high efficient graph-based abstraction for most of the live ML task. We deeply tailored the original version to achieve extreme computing performance by leverage CPU and GPU, more flexible integration method and smaller package size.
 - **Falcon: Cross Platform Dynamic UI System:** Designed a dynamic UI system which can translate HTML/CSS files into AST, then generate native UI component. The system make it possible that app UI update instantly without publish new version. Compared to webview, this system has much better performance because it render all elements as native UI component.
 - **Quark Browser :** Developed brand new mobile browser app 'Quark' from scratch in 2017, it focus on simplicity and AI-powered tool which provides completely different experience from UC. Now Quark is already the one of the most popular browser app in China.
- **Xiaohu** Shenzhen
Tech Co-Founder May 2012 - Jun 2016
 - **Company Intro:** Xiaohu is a B2C e-commercial website which has similar business mode like VIPSHIP/Zulily. We raised more than 4 million USD from LightSpeed LLC and Sequoia Capital.
 - **Role:** Managed whole technology team including app, server, frontend and data analysis, collaborated with product team to deliver various products to both internal and external users.
 - **Case1: Transaction System:** Built a lightweight distributed system which able to handle order placing at 600qps. By leveraging multi instance mysql&redis, the system run steadily more than 500 days while the scale of orders keep rising rapidly
 - **Case2: SKU Crawler System:** Designed a client-server infrastructure which allows crawler task can be dispatched to various worker machine to get task finished. Many agent hiding strategy also be implemented in worker side application in order to fight against the anti-crawler policy of target website.
- **Internships**
 - Morgan Stanley, Analyst(using Perl) at Realtime Market Data Group, Shanghai* 2011
 - Microsoft, C# Desktop Engineer at Office Team, Beijing* 2010 - 2011
 - Tencent, C++ Backend Engineer at QQ Group, Shenzhen* 2019 - 2010

TALKS

- **Build your own neural network engine in Swift:** *Online tech livecast*, Demonstrate how to a simple network structure with backpropagation and forward inference support in Swift
- **Swift for TensorFlow:** atSwift Conf 2018, Introduce a interesting project created by Chris Lattner: Swift for Tensorflow, including basic usage case, core design principle and two examples.
- **From Observer to Observable: Improve maintainability of Giant iOS Project by Functional Swift:** QCon 2018, Demonstrate how to implements elegant error handling and low coupling message dispatching and MVVM binding in giant project by using functional thinking.
- **Functional Design Pattern:** iDev 2016, Talk about design pattern in functional world, including function for decoupling, monad for error handling and logic composition, FRP for event handling and parser combinator for DSL implementation