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Availability: Immediately, **Work Visa**

Portfolios

Tidy: Helps you organize things up!

Motion Recorder: Keeps an eye on concerned!

Personal Statement

4-year continuous **Android** and Webkit work experience for products having **tens of millions of users** , which brings me with good sense of customer service and responsibility.
I love programming very much, which I believe can ease and delight people in such a vast and instant way that I wish to dedicate all my passion to it. Meanwhile outdoor activities and a more friendly environment could refresh me greatly, so I'm looking forward to having a more balanced and colorful life in New Zealand.

Skills

Specialized Skills

- **Android** 4 year work experience, familiar with Android SDK, strong understanding of Android OS mechanism
- **Android frameworks** Suger, Picasso, Volley, RxJava, Gson, DataBinding, have been used in my private projects
- **Performance optimization** a major part of working time has been spent on optimization, like UI performance and network performance
- **TDD** love to write tests towards interfaces of the module going to be developed, and have the habit of adding logs when implementing the module afterwards
- **Java** 1 year, assist my supervisor to do some experiments on PeerSim (Large-scale P2P simulator)
- **C/C++** 4 years, mainly during school and internship, more specifically, server programming and MFC
- **Testing** extensive experience in performance testing, unit testing, stress testing, and daily quality testing
- **Python** 2 years in large-scale data processing, writing benchmark tools, automating repeated work
- **Back-end service integration and development** 3 years of integrating fast data delievery service to QQBrowser client; 1.5 years of network service programming for servers
- **HTML** 1 year, I used to analyze HTML features during Webkit development, which helped me better understanding how it works. And this resume is also written in HTML
- **TCP/IP** 6 years, mostly in mobile network performance optimization, end-to-end communication, and high throughput server programming
- **Various efficiency tools** Git/Vim/Android Studio/Gradle
- **XML/JSON** have been used to organize data in order to visualize it in tools like HarViewer, JsonEditorOnline
- **Database** experience with MS SQL, Oracle
- **Design Patterns** Gof, MVC, etc. I'm totally addicted to designing gracefully and writing every piece of code with best practices and quality
- **Linux** 1.5 years of programming for the Linux platform; another 4 years of development under it; quite familar with it

Scrum

- Practicer of Scrum for 4 years

Creativity

- **15 Practical Invention Patents**, mostly software ideas, e.g.,*A Way To Translate a Word on a Mobile Phone Screen Using Eye-Blinking*; *A Way To Detect Falling Down of a Disabled People;*etc.
- Wrote scripts for stage plays; Wrote a song for my wife

Planning/Organizing

- Organizer of team building, including planning, execution.

Time management

- This is how I manage my time effectively:
    - Record a Task into such tools as Emacs
    - Divide the Task into doable parts
    - Prioritize/Evaluate/Schedule the parts
    - Emacs then will remind me When/What/How

Self Motivated

- Work independently
- Learn various techniques in spare time, such as Vim/Emacs/Git/Python, to help me work better
- Keen on things to be improved, willing to take action. Like my portfolios displayed top-right, they help improve my life

Work History

Software Engineer, Tencent, ShenZhen, China
Sep 2014 - Aug 2015

Worked in an Agile Android development team.
Product: QQ, a popular social app in China, 400 million users.

- **Developed a system that can precisely find the fluency-killer code in our project:** When *UI thread* has been blocked for a long time on a single *loop*, the monitoring module will detect that and report to server the time the blocking loop costs and the *stack* at that time. Server merges the massive stacks, that are reported from lots of clients, into a *stack-frame-tree*, from which the most prone-costly branches can be found. And then the hot-spots would be addressed and presented as issues (in HTML format), which could be fixed through refactoring and cooperation with other developers. To spread good practices for performance and raise the awareness of high-performance coding, a training meeting was held in the department.
  Achievement: the probability of a *loop* to cost 100ms+ dropped by 35%, and 42% for 200ms+, and 49% for 500ms+
  Skills Involved: Android , Performance Optimization , Large-scale Data Processing , Oracle DB , HTML , Python
- **Enhanced *SharedPreferences*:** SharedPreferences originally does not support multi-process very well (file might be corrupted) and *apply* method is not present until API level 9, so extra mechanisms had to be introduced:
  Use Binder IPC to handle multi-process situation and add asynchronous scheme for *commit* method, and also preloading of SharedPreferences files helps a lot. In addition, to make sure correctness and measure the outcome, stress testing and benchmark testing code were deployed at the very beginning of this optimization.
  Achievement: SharedPreferences file corruption seldom reported; Startup speeded up by roughly 10%.
  Skills Involved: Android , Performance Optimization , TDD

Software Engineer, Tencent, ShenZhen, China
Jul 2011 - Sep 2014

Worked as part of an Agile Webkit development team.
Product: QQBrowser, a Webkit-based Android Browser which has 100 million active users every day.

- **Optimized network module:** As mobile network in China is not decent, a lot of efforts were devoted to optimizing browsing speed to give our users outstanding experience. These efforts include (but not limited to): DNS cache; TCP pre-connect, TCP Socket reuse; Making sure the network requests are handled in the right order as their priorities, given that there are no sufficient network resources. In the meantime, batching some requests into one to save the time of sending them multiple times. Benchmark was set up using a camera to inspect even subtle differences caused by a certain optimization.
  Achievement: Page loading speeded up 30%, faster than any other similar products when it's deployed!
  Skills Involved: Network , Performance Optimization , Automated Testing
- **Developed new features such as Push:** Google Cloud Message (part of Google Play) is not available in mainland China, so Push notification has to be developed ourselves to let our users receive notifications (like weather broadcast, breaking news, etc.), from our server. In addition, QQBrowser packed its abilities (e.g. more sophisticated video player, much faster browsing, and of course, Push) into a library that can be shared with other apps. So, my job here was to develop the Push that can serve both QQBrowser and other apps that were built upon the library. The Push was designed this way:
    - The library uses client/server model: the server side can only have one instance system-wide and will

be run in an Android Service, and the client side will be run in apps' process, communicating through AIDL with the server side
    - When one of the apps is started, the client side will launch the right service. In consideration of AIDL compatibility, the one from the latest library will be launched
    - The service collects the apps built upon the library and maintains a TCP connection to the Push server
    - When Push data is received through the connection, the service will dispatch it to the right app's client side, which will display the Push notification and handle user action to the notification

  Skills Involved: Android , Network , NDK , Webkit
- **Established testing framework:** To prevent new crashes and Webkit Layout problems introduced during our daily development, more than 30K web pages are loaded within QQBrowser at the end of each day. More specifically, every tested page has a "baseline", which is actually a snapshot when it's correctly displayed. The actual displaying result will be compared with the baseline to check whether there is a layout problem.
  Achievement: in the system testing phase, crash rate and layout problems decreased by 20% after the framework was deployed
  Skills Involved: Unit Testing, Automated Testing

C++ Developer *(Internship)*, CNCERT(Internet Emergency Reaction Center of China), BeiJing, China
May 2009 - Sep 2010

Worked in a small group, focusing on preventing illegal files from spreading over the *BitTorrent* network. The point is to impact *DHT* mechanism of BitTorrent in such a way that almost all the downloaders of a certain illegal file will download from our massive servers, which will give them fake data.

- **Developed algorithms to impact DHT:** DHT is the only decentralized way of resource-locating in BitTorrent, and it is also a kind of network that is formed by those BitTorrent clients. Every node(or client) in DHT has a *Routing Table* that provides other clients routes to the real resource location. Our goal was to pollute certain nodes' Routing Table to direct the resource-requesting clients to our servers and finally the clients would end up with downloading failure.
  Achievement: We were able to simultaneously stop thousands of files from propagating;
  Published *Conducting Routing Table Poisoning Attack in DHT networks*, IEEE;
  Skills Involved: C++, boost , Network, Epoll , Linux

Education

Master degree of Information and Communication Engineering University of Electronics Science and Technology of China, Chengdu, China. Sep 2008 - June 2011

- Study on *DHT* network hacking, a paper published (*Conducting Routing Table Poisoning Attack in DHT networks*).
- First class People's Scholarship in 2008.

Bachelor degree of Information Security, University of Electronics Science and Technology of China, Chengdu, China. Sep 2004 - Jul 2008

- 3 out of 4 years gained scholarships; grade top 5%
- Recommended for Admission to be a Postgraduate without exams

Interests and Hobbies

- Outdoor Activities: Cycled to Tibet from Chengdu in 28 days; Annual Marathon; Red Bull 24-hour Endurance Race
- Love to direct/perform stage play and comedy show

Referees

Wilder Wang
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