

Muhammad Omer Iqbal

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EDUCATION

Bachelor of Engineering (Hons), Computer Engineering
National University of Singapore, Singapore
June 2014
CAP 4.3/5

CIE A Levels
Aitchison College, Lahore, Pakistan
4 A*s & 1 A

EXPERIENCE

Senior Software Engineer, Assistant iOS Team Lead
Sea (Formerly Garena) July 2014 - Now

Worked on SeaTalk iOS, an enterprise messenger used within Sea and affiliated companies, optimized for businesses in South East Asia.

- Developed several core features including Chat and VOIP
- Designed the architecture of the entire VOIP system, supporting 1 to 1 and group calls, utilising P2P connections with WebRTC under the hood
- Managed a team of 5 iOS developers as the product matured
- Designed and implemented some modules using React Native with Redux & Typescript
- Drove the adoption of FRP using Reactive Swift to manage async flows
- Implemented several performance optimizations, especially around Core Data

Worked on the Garena Mobile iOS app, building it from scratch. The app is a mobile game center that allows Garena users to chat and interact with various game related content.

- Optimised performance and experience of web features embedded within the app.
- Implemented live streaming features, allowing users to view live game streams, as well as broadcast their own gameplays live using a broadcast extension.
- Refactored all async flows to use Reactive Cocoa
- Picked up AngularJS and implemented a forum feature on web
- Mentored junior devs working on the same codebase.

iOS Software Engineer (Part time)

Singapore-MIT Alliance for Research and Technology May 2013 - June 2014

Worked on the Future Mobility Survey, a household travel survey conducted with the Land Transport Authority that uses sensor data from smartphones with machine learning to generate travel information like a person's daily path, stops, modes of transport etc.

- Developed the FMSurvey iOS app from scratch.
- Worked on optimizing battery performance

SKILLS

Languages (Experienced): Objective-C, Swift, Javascript, Typescript
Languages (Intermediate): Haskell, C++, Python, Ruby, C, OCaml
Web Frameworks: React+Redux, AngularJS, Rails, Node.js+Express
Databases: SQLite, MySQL, MongoDB, Redis

TALKS

Strings in Swift

[iOS Conf SG](#) October 2017

A dive into the internals of Swift's String implementation

Rust: Make System Programming Great Again!

[GeekcampSG](#) October 2016

An introduction to system programming with Rust

Enter the Dragon: Taming LLVM

[iOS Conf SG](#) October 2016

Implementing a simple lisp compiler using Swift with LLVM

Monadic Parsers: Implementing a micro Parsec

[Haskell.sg](#) October 2015

Using Monads to implement a simple Parser Combinator Library.

Signal-ing out of Callback Hell

[GeekcampSG](#) September 2015

An intro to Functional Reactive Programming with Reactive Cocoa

EXTRA-CURRICULAR

Chief Organiser, [Garena Tech Speak](#)

Garena Tech Speak (GTS) is a talk series aimed at anyone interested in Software Engineering. It features talks by Garena developers on a wide range of topics, from war stories in production, to new technologies that we are experimenting with.

Core Team, [NUS Hackers](#)

NUS Hackers aims to develop a hacker community in NUS through weekly tech talks, hackathons and workshops