

# Li-Wei Yap

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## Experience

### Hearing Diagnostics Ltd, Edinburgh | Software Engineer

03/2020 - present

- Developed mobile app for controlling remote audio device in Java and C++ using Android NDK, **libssh**, and Gradle.
- Developed parts of the real-time C++17 codebase, Qt front end, and CMake build scripts for quaternion detection and audio synthesis.
- Package management in Python and version control with Git on Linux OS.
- My work was showcased in demos that won the start-up big clients (e.g. *Boots*) and £715,000 in funding from angel investors.

### IntiQuan GmbH, Basel | Programmer & Data Analyst

07/2018 - 09/2018

- Developed script-based workflow in R for statistical analysis and data simulation to evaluate drug effectiveness.

## Projects

### Narradir | Android



- Developed mobile app in Java for automating narration in board games such as *Avalon* with the *ExoPlayer* library.
- Synthesized speech audio files with Text-to-Speech API from Google Cloud SDK in Bash. Automated UI testing with *Espresso*.

### Text-Popover | Mac OS



- Developed desktop menu bar app in SwiftUI framework. The app pops up at user-specified intervals with user-specified texts, such as inspirational quotes or idioms.
- Scraped German idioms off Wikipedia using Python library *Beautiful Soup*, storing data in SQL database.

### XKCD Browser | Android



- Developed mobile app in Java to browse XKCD comic strips. The JSON data of every strip is retrieved from the XKCD website using the *Volley* library.

### Personal Website | Front End



- Developed personal website using HTML/CSS/JavaScript and the Jekyll framework.

### Conway's Game of Life | C++, Qt



- Implemented Conway's Game of Life using C++, with the UI written with Qt.

## Education

### ETH Zürich | M.Sc. Computational Biology and Bioinformatics | GPA: 5.43 / 6.0

09/2016 - 08/2019

- Foci: machine learning; data structures & algorithms; parallel programming; numerical methods.
- Thesis: Developed C++ library for statistical inference on biological mixed-effects models. Achieved two-fold improvement in convergence rate of statistical inference.

### Imperial College London | B.Sc. Biotechnology | Grade: First Class Honours

09/2013 - 06/2016

- Awarded Dean's List, C Ewart Stickings Memorial Prize, and Wiley Prize for academic excellence.
- Thesis: Developed Matlab ODE model of cell-wall dynamics during bacterial sporulation.

## Skills and Interests

<b>Programming</b>	C++ • Java • Python • Swift • Bash • R • SQL • HTML • CSS • JavaScript • Matlab • $\LaTeX$
<b>Frameworks &amp; Tools</b>	Git • Android Studio • CMake • Gradle • SwiftUI • Qt • Jekyll • MPI • Espresso
<b>Data Analytics</b>	Scikit-Learn • Pandas • NumPy
<b>Operating Systems</b>	Linux • Mac OS • Windows
<b>Graphic Design</b>	Inkscape • Gimp
<b>Languages</b>	English (native) • German (Goethe-Zertifikat C1) • Mandarin (good)
<b>Hobbies</b>	social-deduction board games • comedy series • football • acoustic guitar

## Selected Publication

- [1] **Yap L.-W.** & Endres R.G. (2017) A model of cell-wall dynamics during sporulation in *Bacillus subtilis*. *Soft Matter*. 13(44), 8089-8095.