

Li-Wei Yap

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Experience

Hearing Diagnostics Ltd, Edinburgh | Software Engineer

03/2020 - present

- Sole developer of mobile app for controlling remote audio device using Java 8, Android NDK, and `libssh`.
- Developed parts of the real-time C++17 codebase, Qt frontend, and CMake build scripts.
- Package management with Python and version control with Git on Linux OS.
- Designed roadmap for migration of real-time code to an embedded system.
- 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

([GitHub](#) ↗)

- Developed mobile app in Java 8 for narrating introduction to social-deduction board games such as *Avalon*.
- Synthesized speech audio files with Text-to-Speech API from Google Cloud SDK using Bash scripting.

Text-Popover | Mac OS

([GitHub](#) ↗)

- 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.

Personal Website | Full Stack

([GitHub](#) ↗)

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

Sorting Repositories by Commits | Web Scraping

([GitHub](#) ↗)

- Scraped GitHub API using Python and organised data in a Pandas dataframe.

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

([GitHub](#) ↗)

- Implemented Conway's Game of Life using C++, with the GUI 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

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| Programming | C++ • Java • Python • Swift • Bash • R • SQL • HTML • CSS • JavaScript • Matlab • \LaTeX |
| Frameworks & Tools | Git • CMake • Android Studio • SwiftUI • Qt • Jekyll • MPI |
| Data Analytics | Scikit-Learn • Pandas • NumPy |
| Operating Systems | Linux • Mac OS • Windows |
| Graphic Design | Inkscape • Gimp |
| Languages | English (native) • German (Goethe-Zertifikat C1) • Mandarin (good) |
| Hobbies | 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.