

# Ruben Zilibowitz

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## Profile

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I have a masters degree in mathematics. I like functional programming. Human creativity and how it relates to artificial intelligence interests me.

## Education

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2023 : **Masters, Mathematics**; Macquarie University (Sydney, Australia)

- *The Game Semantics of Cartesian Closed Categories: a Syntactic Derivation*

2019 : **BSc, Honours First Class, Mathematics**; Western Sydney University (Sydney, Australia)

- *Thesis title: Leavitt Path Algebras, some new homomorphisms and representations obtained using computational techniques*
- *Dean's Merit List, 2019*
- *School of Computer, Data, and Mathematical Science award for Mathematical Science, 2019*

2010 : **BSc, Mathematics**; University of New South Wales (Sydney, Australia)

- *Minor: Computer Science*
- *University of NSW Faculty of Science Vacation Scholarship, 2008*

## Experience

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**Senior iOS Engineer, AppScore; Sydney, Australia**, 16th January 2023 - Present

- Working with Optus client. Modularising the code and improving software architectural patterns.

**Senior iOS Engineer, Beem It; Sydney, Australia**, 10th February 2022 - 13th January

2023

- Working on Beem It customer facing digital wallet app.

**Senior iOS Engineer, Optus; Sydney, Australia, 9th November 2020 - 10th February 2022**

- Working on MyOptus customer facing app.
- Developed numerous flows including embedded sim and call translate.

**Product Engineer, Senior Manager, GoJek; Jakarta, Indonesia, 28 May 2019 - 6 Oct 2020**

- iOS developer on ride hailing products having hundreds of thousands of bookings every day around Indonesia and South East Asia.
- Worked on re-writing the iOS application using a new software architectural pattern.
- Conducted candidate interviews and reviewing candidate coding assignments.

**iOS Developer, Musica Viva Australia; Sydney, Australia, 2017 - 2018**

- Developing language education software. Aimed at teaching Australian indigenous languages in schools.
- Updating and rebuilding codebase using iOS 11 SDK and Swift 4.

**iOS Developer, Deputec Pty Ltd; Sydney, Australia, 2015 - 2016**

- Developing Swift implementation of employee rostering iOS apps.
- Universal, adaptive, using Core Data and auto layout. REST API integration.

## Side Projects, Conferences, and Training

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TonalEnergyTuner mobile app, contributor since May 2020

- Working with Tonal Energy Inc. <https://www.tonalenergy.com>
- Contributing to C++ Juce app for tuning of musical instruments.
- Developing Ruby on Rails web app and API backend for licensing and payments.

iOS Conf Singapore 2020 : National University of Singapore, Singapore, January 2020

- Participated in two full days of workshops on SwiftUI, concurrency, and server-side Swift.
- Attended two full days of iOS and Swift programming talks on many topics.

HarmonyWiz iOS music app : Launched June 2014

- Co-developed with Wizdom Music LLC, <http://www.harmonywiz.com>.
- Apple USA app store, music category, banner advertisement.

- Invited to speak at Musica Viva Festival; April 2015, Sydney Conservatorium of Music, Sydney, Australia.

Toy Cars open source C++ racing game : Launched 2005

- Hosted on SourceForge, <http://toycars.sourceforge.net>.
- Reviewed in Linux Format UK issue 119. Over 33,000 downloads from Sourceforge.

National Mathematics Summer School : Canberra, Australia, 2000 and 2001.

- Blaker's Award for most outstanding contribution to the summer school.

Attendee at Apple World Wide Developer Conference (WWDC) : San Francisco, USA, 2016

- Participant in labs, tutorials, and talks.

## Summary of Courses Taken

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Western Sydney University; Sydney, Australia

- Deep Learning, 99 (HD). Regularisation, optimisation, Feed Forward Neural Nets (NNs), Convolutional NNs, Recursive NNs. Tensorflow.

University of New South Wales; Sydney, Australia

- Higher Computing 1A, 98 (HD). Haskell programming.
- Higher Computing 1B, 98 (HD). C programming.
- Higher Mathematics 1B, 93 (HD). Linear Algebra and Calculus.
- Higher Physics 1B (Special), 90 (HD). Optics, Quantum Mechanics, Astronomy, Relativity.

Note, HD stands for High Distinction

## Other Skills and Experience

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- Functional programming, reactive programming, category theory, objective oriented programming, Objective C, C, C++, Swift, Haskell, Ruby on Rails, mathematics.
- Plays piano and composes music.