

Employment

April 2020 – present	iOS Developer	Self-employed
<ul style="list-style-type: none"> Delivered two iOS apps to teach chemistry and physics using interactive simulations. Created a physics-based app with a pseudo-3D world, using SwiftUI. Integrated SpriteKit for more advanced molecule dynamics and animations. Wrote comprehensive unit tests using XCTest and added thorough support for VoiceOver. Used Instruments to profile apps and improve performance. 		
Feb 2019 – Apr 2020	Senior Software Engineer	iManage
Sep 2017 – Feb 2019	Software Engineer	
<ul style="list-style-type: none"> Developed performance-intensive backend services using Scala and Java. Awarded the engineering excellence award in our annual employee award ceremony. Implemented many performance improvements, including resolving memory leaks, reducing memory footprint by 50%, and reducing algorithm runtime by up to 90%. Owned development of many new features, including a tool to provide quality metrics of AI and heuristic text extraction algorithms using user training data. 		
Nov 2016 – Sep 2017	Software Engineer	BAE Systems
<ul style="list-style-type: none"> Configured fraud detection workflows using BAE's NetReveal platform for a leading bank. Developed an internal web application in a small team to help run agile planning sessions. 		
Jun 2015 – Sep 2015	Aerospace Engineer Intern	Facebook
<ul style="list-style-type: none"> Developed a MATLAB program to perform conceptual aircraft sizing of a high-altitude, long-endurance unmanned aircraft. Improved the propellor design & analysis process by building a tool in MATLAB to automate a 3rd party Java application. 		

Education

2011 – 2016	MEng Aeronautical Engineering, First class with honours	Imperial College London
<ul style="list-style-type: none"> Masters project: Stabilised a wing from unstable vibrations in a wind tunnel. Wrote a control system on an Arduino, including real-time signal filtering of sensor inputs. Developed MATLAB scripts to implement numerical methods and post-process experimental data. 		

Languages, frameworks and tools

Swift, Scala, SwiftUI, SpriteKit, Java, MATLAB, Jenkins, Linux, ScalaTest, XCTest

Personal projects

Zero Below Zero	Puzzle game for iOS
<ul style="list-style-type: none"> Developed an efficient algorithm to find the minimum number of moves for each level. 	
Wave Writer	Writing app for iOS
<ul style="list-style-type: none"> Used a Fourier series to draw a unique wave which animates as the user types. 	
AnyLog	Flexible logging app for iOS
<ul style="list-style-type: none"> Created flexible data schema to allow logging a variety of data types. 	