

Alexander Macdonald

SOFTWARE DEVELOPER · MOBILE TEAM LEAD

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“Build projects around motivated individuals. Give them the environment and support they need, and trust them to get the job done.”

Education

The University of Dundee

Dundee, Scotland

FIRST CLASS HONOURS IN APPLIED COMPUTING

2013 - 2016

- Awarded the NCR prize for exceptional performance in my 3rd & 4th year
- Regular Hackathon attendee & organiser - winning JP Morgan's prize at Stackshack 2015

The University of the Highlands and Islands

Inverness, Scotland

HND IN SOFTWARE DEVELOPMENT

2011 - 2013

Skills

DevOps Bitrise, Jenkins, AWS, Docker, Vagrant, Serverless

Back-end Express, Apollo, Django, REST, GraphQL, MySQL, PostgreSQL

Front-end React, Redux, RxJS, Handlebars, Styled Components, HTML5, SASS

Mobile React Native, PWAs, Native iOS, Native Android

Programming Javascript, Node.js, Swift, Java, Python, Bash

Technologies Git, Stripe, Firebase, Twilio, Cloudflare, Jira, Confluence, Trello, Sketch

Experience

Vidatec Ltd

Fully Remote

LEAD MOBILE DEVELOPER

Nov. 2020 - Present

- Managing a team of 4 people, providing support & assigning work
- Helping grow team, conducting technical interviews & onboarding new starts
- Heavily involved in our graduate program
- Deploying multiple projects on AWS (EC2, Elastic Beanstalk, Lambda)
- Serverless projects with GraphQL - Apollo Server - API & Next.js web app Deployed to AWS Lambda functions
- Setting up CI/CD for new projects with Bitrise & Bitbucket pipelines
- Multiple Stripe integrations
- Running workshops with potential clients to explore their ideas and outline suitable technologies for implementation

REACT NATIVE DEVELOPER

Jul. 2019 - Nov. 2020

- Software house working on a variety of apps for many clients, some being used by as many as 5 million people
- iOS & Android apps built with React Native
- Creating iOS & Android Native Modules where a clients 3rd party tool only has native SDKs (e.g. MappedIn)
- Many apps would have an accompanying CMS/API (Node.js, Knex.js, Express, Handlebars, MySQL)
- White-Labeling our existing products to assist in sales

Shot Scope - Golf Performance Tracker

Edinburgh, Scotland

iOS DEVELOPER

Jul. 2017 - Jul. 2019

- Solo developer of the native iOS app
- Required BLE to connect to, receive performance data & upload it from all of the Shot Scope golf performance tracking wearables
- Performed initial R&D to move mobile development to React Native
- Supported other developers in the transition to React Native
- Worked on the C# based API hosted on Azure
- Introduced Jenkins for CI/CD

Agenor Technology

Edinburgh, Scotland

APPLICATION DEVELOPER

Jun. 2016 - Jul. 2017

- Maintaining the Iceflo iOS app and API
- Creating the native Android version of the Iceflo app
- Creating the next-gen version of Iceflo web app (Moving from APEX to React.js with a Java API)
- Used Twilio to create chat within the next-gen Iceflo app

- Initially a 12 week summer internship, extended through my final year of university
- Developed Iceflo native iOS application
- Created API written in Java - with a PLSQL database - hosted on an Glassfish server

The University of Dundee

Dundee, Scotland

LAB TUTOR/MENTOR

2014 - 2016

- Helped 1st, 2nd & 3rd year students complete lab tasks & assignments
- Assignments included: Data structures with C++, Web development with Java, Games programming with Unity/C# & Networking
- Tasked with providing longer 1 - 1 mentoring sessions for struggling students

CO-FOUNDER & ORGANIZER OF HACKDEE 2015

Mar. 2015 - Apr. 2015

- Securing sponsorship from tech companies, namely NCR & J.P. Morgan
- Organised food, merch, challenges & prizes from sponsors
- Ensured the 70 person event ran smoothly on the day

Extracurricular Activity

B10S (B1t On the Security, Underground hacker team)

S.Korea

CORE MEMBER

Nov. 2011 - PRESENT

- Gained expertise in penetration testing areas, especially targeted on web application and software.
- Participated on a lot of hacking competition and won a good award.
- Held several hacking competitions non-profit, just for fun.

WiseGuys (Hacking & Security research group)

S.Korea

MEMBER

Jun. 2012 - PRESENT

- Gained expertise in hardware hacking areas from penetration testing on several devices including wireless router, smartphone, CCTV and set-top box.
- Trained wannabe hacker about hacking technique from basic to advanced and ethics for white hackers by hosting annual Hacking Camp.

PoApper (Developers' Network of POSTECH)

Pohang, S.Korea

CORE MEMBER & PRESIDENT AT 2013

Jun. 2010 - Jun. 2017

- Reformed the society focusing on software engineering and building network on and off campus.
- Proposed various marketing and network activities to raise awareness.

PLUS (Laboratory for UNIX Security in POSTECH)

Pohang, S.Korea

MEMBER

Sep. 2010 - Oct. 2011

- Gained expertise in hacking & security areas, especially about internal of operating system based on UNIX and several exploit techniques.
- Participated on several hacking competition and won a good award.
- Conducted periodic security checks on overall IT system as a member of POSTECH CERT.
- Conducted penetration testing commissioned by national agency and corporation.

MSSA (Management Strategy Club of POSTECH)

Pohang, S.Korea

MEMBER

Sep. 2013 - Jun. 2017

- Gained knowledge about several business field like Management, Strategy, Financial and marketing from group study.
- Gained expertise in business strategy areas and insight for various industry from weekly industry analysis session.

Honors & Awards

INTERNATIONAL

- | | | |
|------|---|------------------|
| 2018 | Finalist , DEFCON 26th CTF Hacking Competition World Final | Las Vegas, U.S.A |
| 2017 | Finalist , DEFCON 25th CTF Hacking Competition World Final | Las Vegas, U.S.A |
| 2014 | Finalist , DEFCON 22nd CTF Hacking Competition World Final | Las Vegas, U.S.A |
| 2013 | Finalist , DEFCON 21st CTF Hacking Competition World Final | Las Vegas, U.S.A |
| 2011 | Finalist , DEFCON 19th CTF Hacking Competition World Final | Las Vegas, U.S.A |
| 2012 | 6th Place , SECUINSIDE Hacking Competition World Final | Seoul, S.Korea |

DOMESTIC

2015	3rd Place , WITHCON Hacking Competition Final	Seoul, S.Korea
2017	Silver Prize , KISA HDCON Hacking Competition Final	Seoul, S.Korea
2013	Silver Prize , KISA HDCON Hacking Competition Final	Seoul, S.Korea
2013	2nd Award , HUST Hacking Festival	S.Korea
2010	3rd Award , HUST Hacking Festival	S.Korea
2012	3rd Award , Holyshield 3rd Hacking Festival	S.Korea
2011	2nd Award , Holyshield 3rd Hacking Festival	S.Korea
2011	5th Place , PADOCON Hacking Competition Final	Seoul, S.Korea

Presentation

DevFest Seoul by Google Developer Group Korea

Seoul, S.Korea

PRESENTER FOR <HOSTING WEB APPLICATION FOR FREE UTILIZING GITHUB, NETLIFY AND CLOUDFLARE>

Nov. 2017

- Introduced the history of web technology and the JAM stack which is for the modern web application development.
- Introduced how to freely host the web application with high performance utilizing global CDN services.

6th CodeEngn (Reverse Engineering Conference)

Seoul, S.Korea

PRESENTER FOR <DEFCON 20TH : THE WAY TO GO TO LAS VEGAS>

Jul. 2012

- Introduced CTF(Capture the Flag) hacking competition and advanced techniques and strategy for CTF

6th Hacking Camp - S.Korea

S.Korea

PRESENTER FOR <METASPLOIT 101>

Sep. 2012

- Introduced basic procedure for penetration testing and how to use Metasploit

Writing

A Guide for Developers in Start-up

Facebook Page

FOUNDER & WRITER

Jan. 2015 - PRESENT

- Drafted daily news for developers in Korea about IT technologies, issues about start-up.

AhnLab

S.Korea

UNDERGRADUATE STUDENT REPORTER

Oct. 2012 - Jul. 2013

- Drafted reports about IT trends and Security issues on AhnLab Company magazine.

Program Committees

2016	Problem Writer , 2016 CODEGATE Hacking Competition World Final	S.Korea
2013	Organizer & Co-director , 1st POSTECH Hackathon	S.Korea
2012	Staff , 7th Hacking Camp	S.Korea
2012	Problem Writer , 1st Hoseo University Teenager Hacking Competition	S.Korea
2012	Staff & Problem Writer , JFF(Just for Fun) Hacking Competition	S.Korea