

Abdullah Joseph

Senior Security Researcher

Berlin, Germany

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Certifications

- GPEN (Certified Penetration Tester)
- GREM (Certified Malware Analyst)
- GMOB (Certified Mobile Security Analyst)
- GXPN (Certified Exploit Researcher and Advanced Penetration Tester)

Profile link: <https://www.youracclaim.com/users/afjoseph/>

Experience

Senior Security Researcher @ Appsflyer *July 2023 - Present*

Stack: C/C++ , Cryptography , Reverse-engineering , Android/iOS Internals

Research and consult in the latest adfraud schemes in one of the most used mobile SDKs on the market, installed on more than 90% of all mobile devices around the world.

Senior Software Engineer @ Lantern *August 2021 - July 2023*

Stack: C/C++ , Go , Rust , Networking Protocols , Cryptography

Lead, research and develop a suite of internet technologies that promotes the health of the free internet; provides uncensored access to dissident writers and journalists; and ensures high-speed network throughput.

This work involves heavy knowledge of cryptography (mainly manipulation work on TLS, QUIC, and zero-knowledge proofs), networking technologies (your day-to-day layer 3-4), protocol reversing, basic linux binary analysis and an unhealthy amount of Rust and Go.

Mobile Security Team Lead @ Adjust *April 2019 - August 2021*

Stack: C/C++ , Android+iOS internals , Ruby , Python , Golang

Berlin, Germany

<https://www.adjust.com>

Facilitate the security and R&D of Adjust's mobile products which provide mobile analytics services to clients around the globe. Adjust's open-source solutions are integrated into over 35,000 mobile apps and hitting over 400+ billion data points per month.

This team was responsible for researching, developing, and maintaining Adjust's endpoint and software protection schemes, as well as reverse-engineer adtech malware, develop regular security updates to our open-source SDKs, and automate our production servers.

Selected highlights:

- Train and hire a team of nine software engineers and security specialists.
- Research and prototype new endpoint security projects.
- Speak at several conferences and encourage the rest of the team to do so.
- Liaison the communication with the rest of the tech teams to facilitate the security updates.
- Improved efficiency and productivity by providing technical input to define project roadmaps and prioritize team tasks.
- Oversee the code review process.
- Develop and communicate the yearly research plan.

Security Engineer @ Adjust January 2017 - April 2019

Stack: C/C++ , Android+iOS internals , Ruby , Python , Golang

Berlin, Germany

<https://www.adjust.com>

I started and grew the R&D side of Adjust's Fraud Team that's aimed at researching the current and future mobile Ad Fraud schemes and develop appropriate countermeasures. This included heavy reverse-engineering work, knowledge of low-level Android+iOS internals, and knowledge in endpoint and software protection schemes.

My job also included setting up the infrastructure for testing all our security solutions safely and follow-up on proper secure coding standards and best practices.

Software Engineer - Core SDK @ Adjust May 2016 - December 2017

Stack: Java , Android+iOS development , Objective-C , Swift

Berlin, Germany

<https://www.adjust.com>

Develop and maintain a collection of open-source mobile analytics SDKs used by over 35,000 apps on 7 non-native platforms and 3 native platforms (Android, iOS, and Windows).

Responsibilities include:

- Design and develop a mobile analytics SDK that supports low-cost concurrency, friendly API, safe and secure traffic, and uniform architecture among 10 native and non-native development platforms.
Non-native platforms: React Native, Adobe Air, Unity, Cordova SDK, Marmalade, Cocos2d-x, and Xamarin.
Native Platforms: Android, iOS, and Windows.

Additional responsibilities include:

- Integrating a continuous integration lifecycle
- Writing a mock backend server for testing traffic and running integration tests

<https://github.com/adjust/sdks>

Teacher @ Udacity Feb 2017 - May 2017

Berlin, Germany

<https://www.udacity.com/>

Prepare, teach and run Udacity sessions in Berlin for the Android Nanodegree, as well as individually mentor students, prepare knowledge exchanges, and give career advice.

My responsibilities included:

- Setup a custom education plan for each student
- Regular one-on-ones with students and follow-up on any issues they had with the course.

More info here: <https://www.udacity.com/course/android-developer-nanodegree-by-google--nd801>

Senior Software Engineer @ Mindvalley March 2015 - June 2016

Stack: Android+iOS development , Java , Kotlin , Objective-C

Same as before, just more responsibilities and more security audits.

Software Engineer @ Mindvalley March 2013 - March 2015

Stack: Android+iOS development , Java , Kotlin , Objective-C

Kuala Lumpur, Malaysia

<https://www.mindvalley.com/>

I was part of the core Android+iOS development team responsible for the development of the company's flagship apps. It was also my responsibility to research the latest Android and iOS trends and architecture systems to maintain a clean and testable codebase.

Furthermore, introducing automation as part of the testing infrastructure for our mobile apps was one of the main initiatives I've worked on.

At later stages, my task shifted mainly to auditing and securing our company's infrastructure. This involved working closely with most tech team leads to ensure secure and uniform communication from client apps to the backend.

List of apps we successfully shipped and maintained:

- Mindvalley Academy
- Android: <https://play.google.com/store/apps/details?id=com.mindvalley.mva>
- iOS: <https://apps.apple.com/us/app/mindvalley-learn-and-evolve/id1108786610>
- Omvana:
- <https://play.google.com/store/apps/details?id=com.omvana.mixer>
- iOS: <https://apps.apple.com/us/app/omvana-get-in-flow/id595585396>

Software Engineer @ Block Party Sdn Bhd February 2011 - April 2013

Stack: C# , Unity , Java , Objective-C , Android+iOS Development

Kuala Lumpur, Malaysia

<http://www.blockparty.co.jp/en/>

Develop and maintain four gaming mobile apps (Android and iOS), as well as, liaison with designers and QA testers to deliver feature requests in a timed and orderly fashion. I used Unity game engine and native Android + iOS extensively.

Furthermore, at the later stages, I was responsible for training and mentoring the juniors.

Professional Freelancer *January 2010 - January 2011*

I freelanced five Java, C++ and Python contracts (fully unit-tested with automation and a proper build system) in different hire-a-developer platforms. This was mostly done to gain experience on the side while working on university studies, as well as pay off my college studies. Life as a college student is hard...

Speaker Profile

- [DefCamp 2018: Introduction to Reversing Malware](#)
 - [DefCamp 2018: Stealing Traffic: Analyzing a Mobile Fraud Operation](#)
 - [BSides Ljubljana 0x7E3: Reversing Mobile Malware](#)
 - [RuhrSec 2019: Reversing Fraudulent Apps](#)
 - [HITB Amsterdam 2019: Reversing Mobile Malware](#)
 - [Video](#)
 - [samsclass.info CNIT 128 Spring 19 guest lecturer: Analysing VikingHorde](#)
 - [Nanosec 2019: Code Execution Analysis in Mobile Apps](#)
 - [BSides Ljubljana 0x7E4: Dangerous games, binary obfuscation and how not to shoot yourself in the foot while reversing ransomware](#)
 - [Codemotion Amsterdam 2020: Dangerous games, binary obfuscation and how not to shoot yourself in the foot while reversing ransomware](#)
 - [OWASP Berlin 20-03-31: Software Protection](#)
 - [Android Security Symposium 2020: Semi-Interactive Simplification of Hardened Android Malware](#)
 - [Video](#)
 - [R2Con 2020: Semi-Interactive Simplification of Hardened Android Malware](#)
 - [Video](#)
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Education

Bachelor's Degree in Computer Games Development @ Staffordshire University *2010 - 2013*

Dual Degree with Asia Pacific University in Malaysia