



# JunWei Song

Security Researcher

## Contact



Taiwan



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## Education

National University of Kaohsiung,  
Master in Information  
Management, 2020

## Public Speaking

Security Related:

- [Black Hat Asia Arsenal 2021](#)
- [Oh My H@ck 2021](#)
- [DEFCON 28 Blue Team Village](#)
- [HITB Lockdown 002](#)
- [ROOTCON 2020](#)
- [Grayhat 2020](#)

PyCon Related:

- [Europython 2020](#)
- [PyCon India 2020](#)
- [PyCon Taiwan 2020/2019](#)
- [Pycon Korea 2019](#)
- [PyCon Malaysia 2019](#)

## Personal Profile

JunWei is a security researcher and open-source enthusiast from Taiwan. A paranoid Pythonista and CPython contributor who now focuses on Android reverse engineering and malware analysis. And as a member of the PyCon Taiwan Program Committee, previously presented at Black Hat, DEFCON, HITB, ROOTCON, GrayHat, PyCon Europe/TW/KR/MY/IN. He's the co-founder of Quark-Engine and the Quark package maintainer on Kali Linux, leading Quark to participate in the GSoC under the HoneyNet Project since 2021.

## Work Experience

### Telecom Technology Center, Taiwan, Security Researcher

October 2018 - Now (2 years) - working during master's degree

Develop an Android malware scoring system **from zero to one**, as **Lead Developer**, in charge of Quark core function design, program development, program testing, documentation writing. Communicate and coordinate with team members, and cooperate through Gitflow. Also actively promote this project to train new members.

Using open source tools such as Jadx, radare2, ghidra and quark-engine (developed by me) to investigate whether there are potential malicious behaviors inside the Android applications.

### Dowton Electronic Materials, Taiwan, Independent Contractor for network infrastructure

March 2017 - June 2017 (3 months) - working during college

### Galaxy Software Services Corporation, Taiwan, Web Development Intern

July 2016 - August 2016 (2 months) - working during college

## Vulnerability Research

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CVE-2019-9674: zip bomb in Python zipfile module.

## Technical Blog

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### CPython-internals

Analysis of CPython interpreter implementation principles and CPython source code analysis.

## Books Reviewer

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- 職業駭客的修練：機械碼與底層的把玩藝術
- 職業駭客的告白II部曲：Python和Ruby啟發式程式語言的秘密
- 職業駭客的告白III部曲：C語言、組合語言與逆向工程的秘密
- 駭客的修練：使用IDA Pro進行底層分析

## PyCon TW Community

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- PyCon Taiwan Program Committee since 2020
- PyCon Taiwan Review Board since 2020

## Authored Open-Source Projects

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### Quark-Engine



An Obfuscation-Neglect Android Malware Scoring System.

### sunzip

a Python package, providing secure unzip against zip bomb.

## Open-Source Contributions

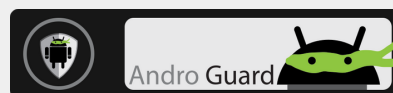
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### CPython



- 1. Find the Zip Bomb vulnerability and successfully apply for a CVE number in Python zipfile module.
- 2. Writing zipfile module decompression pitfalls in Python official documentation.

### Androguard



- 1. Add a new feature in the Androguard module, allowing users to query the Android APIs usage from given APK.
- 2. Provide an example to allows users to query the decompilation instruction set corresponding to a specific function.
- 3. Solve the problem of dependency packages and remind users in official documentation.