ISINGIZWE DIDIER FRANK

RESEARCH ENGINEER (AI SECURITY) AT CHANGHONG



Profile

I am a committed computer enthusiast from Rwanda. I am diligent, reliable, adaptable, self-motivated and resultoriented

Experience

2021 - Present CHANGHONG

Research Engineer, Chengdu, China From July 2021 - Present Changhong Information Security Laboratory -Al Security department

2020 - 2021 NSFOCUS

Network Security Researcher, Beijing July 2020 - July 2021: Anomaly Detection (malware-wise) from

Encrypted network traffic using Artificial Intelligence approaches like Machine Learning, Deep Learning, etc...

 Improving existing models & integrating cutting-edge technologies in Network Security approaches.

2019 - 2021 Tsinghua University - Department of Computer Science and Technology

Graduate Student Researcher, Beijing

- Research Interest: Artificial Intelligence in Network Traffic Classification.
 - My current research consists of integrating AutoML approach in supervised learning approach as well as fine-tuning existing deep learning models with the purpose of coming up with best hyper parameters that can accurately get insight from encrypted network traffic to detect abnormal traffics.
 Under the supervision of Jun Li & DongSheng Wang.

 Network Security Lab RIIT

Interests

Interest - Al

Machine Learning

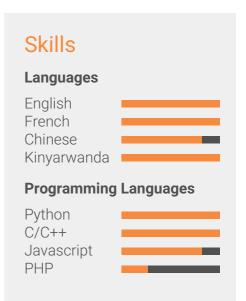


- Deep Learning
- Natural Language Processing
- Computer Vision

Interest



- Network Security
- Web & Mobile Development



2017 - 2020

China Admissions

Al Developer, Beijing

- Developing & maintaining Chatbots based on Natural Language Processing(**NLP**) conversations responsible for automated replies to questions or inquiries about studying in China from Humans(End-users) according to their interests.
- Implementing interactive voice response(IVR) technologies.
- Automating company operations.

16th Dec 2018

15th Dec 2018 - CHINA ORGANIZATION FOR **DEVELOPING ENGINEERS (CODE)**

Judge & Mentor, Beijing

 Robotics and Python Programming Competition at AIDI School held in Beijing/China.

Education

2019 - 2021

Master's degree in Computer Science and Technology - Advanced Computing program

Tsinghua University, Beijing

- Fall 2019 semester curriculum: Combinatorics & Algorithm Design, Advanced Machine Learning, Advanced Network Management, Advanced Network Security and Distributed Database systems.
- Spring 2020 semester **curriculum**: Deep Learning, Distributed Systems, Natural Language Processing, Web Information & Retrieval, Big data systems and Human Computer Interaction technologies.
- Thesis: Analyzing Learning-based **Encrypted Malware Traffic** Classification with AutoML

Contact

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Achievements

Best Oral Paper Presentation at IEEE-ICCT2021

Oct. 2021: I have been selected as the best presenter at the 2021 IEEE 21st International Conference on Communication Technology

Distinguished Student Award

2015-2016: Awarded at Beijing Institute of Technology.

Excellent Student Award

2016-2017: Awarded at Beijing Institute of Technology

"RACESCAPE" Game

2015: Developed & officially launched my Computer game "RACESCAPE"

16th place in Coding Game competition

Feb 26th, 2017: I globally won the 16th place among 3.508 Codingamers in Ghost in the Cell Contest on CodinGame platform.

2015 - 2019 Bachelor of Science in Computer Science and Technology

Beijing Institute of Technology, Beijing

- Studied both computer hardware and software design. It encompasses both the study of theoretical algorithms and the practical problems involved in implementing them through computer hardware and software. My curriculum comprised of many branches, including artificial intelligence, software engineering, programming and computer graphics.
- Thesis: Cross Virtual Machine Execution of Python Program Based on GraalVM [Under the supervision of Prof. Ji Weixing]

2009 - 2014 A'level (High School)

College Saint Andre, Kigali/Rwanda Studied Mathematics, Physics, **Computer Science** and Entrepreneurship.

Publications

Scientific Journal | Publisher: IEEE

ANALYZING LEARNING-BASED ENCRYPTED MALWARE TRAFFIC CLASSIFICATION WITH AUTOML

Didier Frank Isingizwe, Meng Wang, Wenmao Liu, Dongsheng Wang, Tiejun Wu and Jun Li | 2021 2021 IEEE 21st International Conference on Communication Technology (ICCT) proceedings. It is indexed by El Compendex & Scopus.

IEEE Xplore: https://ieeexplore.ieee.org/document/9658106

Reference

- Article about RACESCAPE game: https://taarifa.rw/arwandan-computer-gamesdeveloper-rocking-in-china/
- Codingame Platform
 Competition:
 https://www.codingame.com/le
 aderboards/challenge/ghost-in the- cell/global

My profile is highly ranked at Codingame: https://www.codingame.com/profile/705699d9505c02b83092521504b185c10828071

Portofolio: https://frankdidier.github.io