

# Songlin Jiang

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🐦 [HollowM186](#) • [HollowMan6](#) • Last updated on November 10, 2023

My academic fervor converges with enhancing **computer systems, networks, databases**, and their corresponding **security** aspects, which allows my research to have impacts on computing for both the environment (**greener while efficient**) and people (**faster while reliable**). Additionally, I am a passionate **free software advocate**. During my leisure time, I maintain several open-source projects and contribute to many others.

## Education

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**M.Sc. in SECCLO Erasmus Mundus**, *Aalto University* (4.93/5) 2022 – 2024

○ Specialization: **Security and Cloud Computing**

**M.Sc. in SECCLO Erasmus Mundus**, *Technical University of Denmark (DTU)* 2023 – 2024

○ Specialization: **Reliable Distributed Systems**

**Exchange**, *University of Leeds* Spring 2020

**B.Eng. in Computer Science & Technology (Honors)**, *Lanzhou University* (91/100) 2018 – 2022

○ Thesis: *A Short-Term Wind Speed Multistep-Ahead Hybrid Prediction Model based on ICEEMDAN and Prophet-GRU-NN*

○ Supervisor: [Prof. Chao Ren](#)

## Experience

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**Developer Relations Engineer**, *Enclave* (confidential computing, with [Prof. Sebastian Gajek](#)) 06/2023 – Present

○ Technical **documentation**, tutorials and content creation

○ Channel management to **interact** with the community and grow the base

**Coding Experience**, *Igalia* ([Wolvic](#), ex. Mozilla Firefox Reality) 06/2023 – Present

○ **VR Browser** Development, **Android** deprecated methods refactoring

○ Address user issues, UI, browser, and **openXR** related feature implementation

○ Contributed to the majority of the features available from [v1.4.2](#), [v1.5](#), and [v1.5.1](#)

**HPC Developer Internship**, *CSC - IT Center for Science* 05/2023 – 08/2023

○ Develop the **GPU monitoring service** for HPC clusters (NVIDIA and AMD GPUs, including LUMI)

○ Develop the Documentation GPT chatbot service using [llamaIndex](#), [LangChain](#) and [Redis](#)

○ Make **improvements** to the HPC web operating interface project *Open OnDemand* in **Ruby on Rails**

○ LUMI ranked **3rd** around the world and **1st in Europe** at HPC supercomputer TOP500 list by 2023

**CNCF LFX Mentorship**, *Kubescape* (Kubernetes security platform) 03/2023 – 05/2023

○ Add packaging support for various **package managers** in **Linux**, **macOS**, and **Windows**

○ Improve **release CI** by adding **ARM64** binaries building and testing support (by **QEMU** and **cross compiling**), and also support Kubescape auto version bumping for other Kubescape-related repositories

○ Enable Kubescape [GitHub action](#) to support **code review** based on generated [SARIF report](#)

○ A [blog post](#) by **Cloud Native Computing Foundation (CNCF)** that introduces my work

**Rhino-Bird Open-Source Training Program**, *Tencent* (Kona JDK) 07/2022 – 09/2022

○ Generate keypairs for **SM2** by various algorithms with [JDK library](#), compare **performance** and **security**

- Google Summer of Code, MIT CSAIL & Google** (Blockly, web-based visual program editor) 05/2022 – 09/2022
- Allow selecting, dragging and manipulating multiple blocks for Google Blockly by [creating a plugin](#)
  - Resolve the [issue](#) that had troubled the **Google Engineers** for a **decade** (since the Blockly project started)
  - [@mit-app-inventor/blockly-plugin-workspace-multiselect](#) now has average **50+** downloads per week
- Summer of Bitcoin, Cryptonarchy Debian** (Bitcoin related Debian packages) 05/2022 – 08/2022
- Add Continuous Integration (CI) by investigating **systemd** support inside Docker with GitHub Actions
  - [Chances](#) to get into this internship in 2022: **83/20317**
- RL Open Source Fest, Microsoft Research NYC** (Vowpal Wabbit, ML library) 05/2022 – 08/2022
- Add native CSV parser support for the Vowpal Wabbit project in C++, **100%** Test & Code Coverage
  - Finally managed to make **10x performance improvement** and is comparable to VW text format
- Open Source Intern, Institute of Software, CAS** (openEuler, Linux distribution) 01/2022 – 07/2022
- **First** to obtain 150 intern credits. Help solve 6 issues, related technologies include **D-Bus**, **Glib**, building Cloud Native **Container** images, **Rust** programming, **Chrome DevTools Protocol**, test case, **RPM** packaging
  - One of the achievement [mdbook-pdf](#) now has average **100+** downloads per week
- Google Summer of Code, openSUSE** (IBus, input method framework) 06/2021 – 08/2021
- Add custom themes feature for IME framework IBus, improve IBus settings support in GNOME
  - A [blog post](#) at **openSUSE News** that introduces my work
  - **GNOME extension** [Customize IBus](#) now has average **100+** downloads per week
- OSPP Summer, openEuler** (Developed an ISO writer using QT and C++) 07/2021 – 09/2021
- OSPP Summer, Emacs Application Framework** (EAF, work with [Yong Wang](#)) 07/2020 – 09/2020
- Address issues using **Emacs Lisp**, **Python**, **JavaScript**, **SQLite** to add new features for Emacs Application
  - A [blog post \(in Chinese\)](#) about my work posted by Yong Wang (ManateeLazyCat)
- Summer of Code, Alibaba** (Arthas, Java diagnostic tool) 07/2020 – 08/2020
- Write Chinese and English online tutorials for Arthas using **Katacoda** and **Vue.js**
  - **Highlight**: Support directly searching Class Loader by name instead of Hash Code using Java
  - A [Wechat post \(in Chinese\)](#) about my work posted by [hengyunabc](#)

## Certificates & Honors & Awards

SECCLO Erasmus Mundus Scholarship (26/767) Full-ride scholarship, including tuition and living costs	2022 – 2024
Aalto University School of Science Dean's Incentive Scholarship	2023
Cloud Captains in <b>Linux Foundation</b> Training ( <a href="#">LiFT</a> ) <a href="#">Scholarship (China)</a>	2022
<b>Huawei</b> Cloud Certified Developer Associate in Internet of Things (HCCDA - IoT)	2022
Certified Kubernetes Administrator ( <a href="#">CKA</a> ), <b>CNCF</b>	2022
<a href="#">Recognized Tencent</a> Open Source Contributor Only 30+ were issued globally by the end of 2022	2022
<a href="#">Intern of Excellence Award at Tencent</a> 2/4000+ to receive all the 3 kinds of intern awards	2022
Intern of Excellence & Star of Open Source Award in <a href="#">openEuler Open Source Internship</a> Only 3/150+ interns received both awards	2022
<b>China Ministry of Education &amp; Huawei "Intelligent Base" Future Star Scholarship</b>	2021
Software Design Engineer, <a href="#">China Qualification of Computer and Software Professional</a>	2021

Excellent Student Award in <b>Baidu Software Engineering Training Camp</b>	2021
Academic Aces in <b>Linux Foundation Training (LiFT) Scholarship (China)</b>	2020
<b>CATTI</b> Level 3 (English & Chinese) Translator	2020
<b>Best Paper Award</b> in <b>Lanzhou University</b> Summer Social Practice Report	2020
Paper: Research on the Functionality and Optimization of Urban Communities in China During COVID-19 in 2020	
<b>Award in openEuler University Developer Competition</b>	2020
(24/547 Teams) (I participate only by myself) <b>Ranked 1st</b> in final defense	
<b>Star of Innovation Award</b> in <b>Alibaba T-head OCC Developers IoT Innovation Competition</b>	2020
My proposal <b>ranked 1st</b> in voting (850 votes, 300 more than the 2nd one)	
<b>China Scholarship Council Outstanding Undergraduate International Exchange Scholarship</b>	2019
(Only 1) Full covering of visa fees, traveling fees, and living costs, plus the host university exchange program tuition fee waiver agreement	
<b>Google InnoCamp Hangzhou BoostMakers – TensorFlow Boost</b>	2019
40+/2000+	
<b>Excellent Project Award</b> in <b>Lanzhou University</b> Innovation and Entrepreneurship Plan	2019
Project: Renaissance – AI + Dunhuang Art, supervised by <b>Prof. Qingguo Zhou</b>	
<b>Nine Lanzhou University</b> undergraduate scholarships	2018 – 2022
3 x scholarship for academic excellence, 5 x scholarship for <b>innovation and entrepreneurship projects</b> , 2020 scholarship for IELTS test fee	

## Open Source Repositories

1.5k+ GitHub followers. 55.6k+ GitHub stars across all of the following selected repositories:

1. <a href="#">kubescape/kubescape</a>	★9.1k	<i>Kubernetes Security Platform</i>	2023
Rank #9 among all contributors with 40 commits, 745 lines of additions and 555 lines of deletions			
2. <a href="#">Igalia/wolvic</a>	★635	<i>Immersive VR Browser</i>	2023
Rank #7 among all contributors with 117 commits, 8008 lines of additions and 3712 lines of deletions			
3. <a href="#">VowpalWabbit/vowpal_wabbit</a>	★8.3k	<i>Machine Learning System</i>	2022
Rank #77 among all contributors with 3 commits, 1611 lines of additions and 83 lines of deletions			
4. <a href="#">ThibaultJanBeyer/DragSelect</a>	★606	<i>DragSelect JavaScript UI Library</i>	2022
Rank #6 among all contributors with 3 commits, 213 lines of additions and 23 lines of deletions			
5. <a href="#">debian-cryptoanarchy/cryptoanarchy-deb-repo-builder</a>	★138	<i>Bitcoin Packages for Debian</i>	2022
Rank #4 among all contributors with 7 commits, 245 lines of additions and 22 lines of deletions			
6. <a href="#">HollowMan6/mdbook-pdf</a>	★106	<i>MdBook backend for PDF Generation</i>	2022
Rank #1 among all contributors with 35 commits, 3152 lines of additions and 527 lines of deletions			
7. <a href="#">mit-cml/workspace-multiselect</a>	★5	<i>Blockly Multi-Select Plugin</i>	2022
Rank #1 among all contributors with 18 commits, 11846 lines of additions and 20978 lines of deletions			
8. <a href="#">openSUSE/Customize-IBus</a>	★47	<i>Full Customization of IBus UI</i>	2021
Rank #1 among all contributors with 354 commits, 42984 lines of additions and 30128 lines of deletions			
9. <a href="#">HollowMan6/Wechat-Timed-Message</a>	★22	<i>GitHub action for WeChat Message</i>	2021
Rank #1 among all contributors with 99 commits, 4139 lines of additions and 1718 lines of deletions			
10. <a href="#">openSUSE/IBus-Theme-Hub</a>	★19	<i>IBus Themes CSS</i>	2021
Rank #1 among all contributors with 21 commits, 3190 lines of additions and 442 lines of deletions			
11. <a href="#">openSUSE/IBus-Theme-Tools</a>	★13	<i>IBus Theme Generator</i>	2021
Rank #1 among all contributors with 104 commits, 8558 lines of additions and 4654 lines of deletions			
12. <a href="#">alibaba/arthas</a>	★33.7k	<i>Java Diagnostic Tool</i>	2020
Rank #2 among all contributors with 80 commits, 25191 lines of additions and 1543 lines of deletions			
13. <a href="#">emacs-eaf/emacs-application-framework</a>	★2.8k	<i>Emacs Application Framework</i>	2020
Rank #5 among all contributors with 49 commits, 3482 lines of additions and 1033 lines of deletions			
14. <a href="#">HollowMan6/TinyML-ESP32</a>	★106	<i>TinyML Programs for ESP32</i>	2020
Rank #1 among all contributors with 11 commits, 78393 lines of additions and 19530 lines of deletions			
15. <a href="#">HollowMan6/SRMD-Pytorch</a>	★20	<i>Super Resolution Model</i>	2020
Rank #1 among all contributors with 23 commits, 21397 lines of additions and 1399 lines of deletions			

## Invited Talks

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Content, Link to the talk, and Date:

1. [Virtual Network Systems among Containers](#), Aalto University Secure Systems Demo Day 06/2023
2. [Multi-Select Plugin](#), Google Blockly Summit 06/2023
3. [Native CSV Parser](#), Microsoft Research NYC Seminar (RLOSfest) 08/2022
4. [Summary of my Open Source Internship](#), openEuler Excellent Intern Seminar 08/2022
5. [Update Notification Program in Python](#), openEuler University Developer Competition 05/2021
6. [Summary of my Contribution to Arthas](#), Alibaba Summer of Code Presentation 08/2020

## Professional Activities

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openSUSE Member

2021 – Present

Continued and substantial contributions to the openSUSE project. With voting rights and the ability to run for the openSUSE board

## Software Copyright

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- Hollow Software for Smartly Memorizing Words [CN 2020SR0839716](#)
- Hollow Software System for Sport Center Management [CN 2020SR0839709](#)
- Hollow Software for Jack Compiler [CN 2020SR0839702](#)
- Hollow Software for Picture & Video Information Hiding En-Decryption [CN 2020SR0079950](#)
- Face Recognition Access Control System [CN 2019SR1388115](#)

## Publications [[Google Scholar](#), 2 citations with h-index of 1]

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2019.....

1. [Voting System Based on Wechat Pay](#)  
Songlin Jiang  
Computer Engineering & Software 2019

## Skills

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**Programming** Go, Rust, Java, Kotlin, JavaScript, C++, C, Python, HTML, Shell, SQL ...

**Frameworks** GitHub Actions, Flutter, React, Viper, Selenium, TensorFlow, scikit-learn ...

## Courses

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Some top-quality courses I've taken:

- **Program Analysis**, DTU Fall 2023
- **Program Verification**, DTU Fall 2023
- **Programming Parallel Computers**, Aalto University Spring 2023
- **Platform Security**, Aalto University Spring 2023
- **Cloud Software and Systems**, Aalto University Fall 2022
- **Multimedia Services in Internet**, Aalto University Fall 2022
- **Designing and Building Scalable Web Applications**, Aalto University Fall 2022
- **Network Security**, Aalto University Fall 2022
- **Formal Languages and Finite Automata**, University of Leeds Spring 2020