

# Songlin Jiang

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🐦 [HollowM186](#) • [HollowMan6](#) • Last updated on November 9, 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

**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

**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**

**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**, *Cryptoanarchy 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

## Certificates & Honors & Awards

SECCLO Erasmus Mundus Scholarship <small>(26/767) Full-ride scholarship, including tuition and living costs</small>	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 <small>Only 30+ were issued globally by the end of 2022</small>	2022
<a href="#">Intern of Excellence</a> Award at <b>Tencent</b> <small>2/4000+ to receive all the 3 kinds of intern awards</small>	2022
Intern of Excellence & Star of Open Source Award in <a href="#">openEuler Open Source Internship</a> <small>Only 3/150+ interns received both awards</small>	2022
<b>China Ministry of Education &amp; Huawei</b> "Intelligent Base" Future Star Scholarship	2021
Software Design Engineer, <a href="#">China Qualification of Computer and Software Professional</a>	2021
Excellent Student Award in <b>Baidu</b> Software Engineering Training Camp	2021

Academic Aces in <b>Linux Foundation</b> Training (LiFT) Scholarship (China)	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</b> OCC Developers IoT Innovation Competition	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. 55.5k+ 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="#">lgalia/wolvic</a> — ★633 — <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> — ★137 — <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="#">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	
10. <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	
11. <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	
12. <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	
13. <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	

## Invited Talks

Content, Link to the talk, and Date:

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