**Qi Sun**

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**EDUCATION**

**Xi’an Jiaotong University**  09/2020-06/2024

Bachelor of Engineering in Software Engineering

Overall GPA: 81.8/100 | Junior GPA: 85.9/100 | Senior GPA: 86.89/100 | Ranking: 48/140

TOEFL=102(R26+L29+S21+W26)

GRE=316(V147+Q169+AW3.5)

**PUBLICATION & PATENT**

[1]Qi Sun, AccuRapidGuard: Advancing Phishing Website Detection with High Performance and Efficiency, *2nd International Conference on Software Engineering and Machine Learning (CONF-SEML 2024),* Accepted, Oct. 05, 2023

[2]Software Copyright: Panoramic Display System Based on Style Transfer Algorithm, July 05, 2023

**RESEARCH EXPERIENCE**

***Research Assistant,* Research on Adaption between Pretext Vision Representation and Downstream Object Perception**

*Xian Jiaotong University Advised by Prof. Wei Ke*  10/2023-Present

* To address the transfer issues of visual representations based on self-supervised learning in target perception and enhance the performance of self-supervised pre-trained models on target perception tasks
* Shouldered the duties of compression and lightweighting of large models
* Attempting to use knowledge distillation and network architecture design optimization to reach the goal

***Summer Research,* Intelligent Disposal Techniques for Malicious Traffic in Large-Scale Networks**

*Central South University Advised by Prof. Jianxin Wang & Prof. Weiping Wang* 08/2023-11/2023

* Completed independently the construction of a knowledge base for Cyber Threat Intelligence (CTI) and the coding work based on CTI reports to build a knowledge graph, and constructed a fine-grained attack and defense knowledge graph to lay the foundation for exploring new technologies in intelligent disposition of malicious traffic based on knowledge-assisted decision-making
* Employed multiple pattern recognition and NLP techniques such as Aho-Corasick algorithm and Part-Of-Speech Tagging to extract new entities from CTI reports with an accuracy rate of 90.3%
* Employed Sentence BERT to carry out extraction of entity relationship and gained an accuracy of 83.8%

***Independent Study,* URL-Based Phishing Website Detection**

Institute of Information Engineering, Chinese Academy of Sciences Advised by Prof. Peng Zhang 05/2023-08/2023

* Built a URL detection model named AccuRapidGuard utilizing parallel CNN, GRU, attention mechanism, and fully connected layers
* Reached the similar performance of the baseline model with an accuracy of 98.3% and improved operation efficiency by 34.93%
* Published a paper AccuRapidGuard: Advancing Phishing Website Detection with High Performance and Efficiency

***Team Leader,* Visual Configuration of Smart Switches and Appliance Connections**

*2022 National College Student Innovation and Entrepreneurship Training Program Advised by Prof. Wei Ke* 10/2022-04/2023

* Achieved barrier-free control of conventional household appliances to enable affordable smart home automation by introducing a cost-effective smart module
* Programmed using Arduino and Keil to set up the hardware framework and realize functions of remote control of household appliances using multiple transmission protocols such as Bluetooth, Thread and Zigbee
* Established the software using Android Studio and set up a MQTT server with Alibaba Cloud

***Core Research Member,* Automatic Style Conversion System for Road Scene Video Images**

*2021 National College Student Innovation and Entrepreneurship Training Program Advised by Prof. Yaochen Li* 11/2021-05/2022

* Assisted with the realization and improvements of the deep learning style transfer model using Spatial Attention Network(SANet) as backbone
* Employed techniques, including SpringBoot framework and MySQL, to develop the back-end interface and the database of the system
* Awarded third prize at Tencent Cup, Bronze Medal at the School College Students Internet+ Innovation and Entrepreneurship Contest
* Obtained computer software copyright registration certificate in July 5th 2023

**ACADEMIC INVOLVEMENTS**

***Core Member,* A Simplified Version of a Compiler System for a C-like High-level Programming Language** 03/2023-05/2023

* Wrote a compiler system for a simplified high-level programming language using C that featured intermediate code generation with the ability of error-handling capabilities and the use of a symbol table

***Team Leader,* Development of WebSocket-based Secure Communication Software**  09/2022-10/2022

* Used the VUE+SpringBoot framework to build a secure communication software based on the RSA/AES encryption algorithms and WebSocket protocol

***Team Leader,* Design of Virtual Logistics Management System**  07/2022 - 08/2022

* Utilized Spring Boot, MyBatis, Redis, MySQL, Vue + ElementUI, and axios to complete a virtual logistics management system that includes modules for basic information, query statistics, market management, delivery management, financial management, and other main functions in logistics management

**INTERNSHIP EXPERIENCE**

***Development Intern*, Chengdu Suncaper Data Co. Ltd**  05/2023 - 06/2023

* Participated in the development of the recommendation feature for the website system using KNN, and realized friends recommendation
* Received comprehensive training in big data processing and analysis, such as building a Hadoop cluster in the Ubuntu, utilizing Hive for big data storage and management, performing big data processing and analysis with PySpark, and achieving interactive data visualization using Zeppelin

**HONORS & AWARDS**

School Third Scholarship 09/2023

Provincial Bronze at Internet+ College Students Innovation and Entrepreneurship Contest 08/2022, 08/2023

Provincial Third Prize at National College Students Mathematical Contest in Modeling 08/2022

School Third Prize at Tencent Cup Innovation and Entrepreneurship Contest 03/2022

Outstanding Student Scholarship of Hainan Province Xi'an Jiaotong University Alumni Association 09/2020

**Extracurricular Activity**

Post-Pandemic Era Consumption Survey in China 03/2023

Together in the Snowy Region, Heading West to the Snow Lotus Summer Volunteer Teaching Activity in Tibet 06/2021 - 08/2021

**ADDITIONAL INFORMATION**

Programming Languages: C, C++, Python, Java, JavaScript, SQL

Tools: Git, PyCharm, Visual Studio Code, Intellij IDEA, Android Studio, Arduino