**Qi Sun**

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**EDUCATION**

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

Bachelor of Engineering in Software Engineering 81.8/100 大三overall 85.9/100 排名 48/140 四年major均分 86.89/100

TOEFL Score: 102 R26 L29 S21 W26

GRE Score: 316 147+169+3.5

**PUBLICATION/PAPER & PATENT:**

[1]孙旗, AccuRapidGuard: Advancing Phishing Website Detection with High Performance and Efficiency；2nd International Conference on Software Engineering and Machine Learning (CONF-SEML 2024)，接收时间 2023.10.5

[2]软件著作权：基于风格迁移(style transfer algorithm)的全景展示系统，2023.7.5

**RESEARCH EXPERIENCE**

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

**RA 西安交大** Dr. Wei Ke 10/2023-Present

**该项目旨在解决基于自监督学习的视觉表征在目标感知上的迁移问题，提升自监督预训练模型在目标感知任务上的性能。**

作为该项目的重要部分，我负责实现大模型的压缩和轻量化，正在探索使用如知识蒸馏(knowledge distillation)、网络结构优化(network architecture design optimization)等算法实现目标。模型轻量化对于在计算资源受限的智慧安防系统、智能交通系统、智能化武器装备等国家重点领域的应用至关重要

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

Summer Research Central South University Advised by Dr. Jianxin Wang & Dr. Weiping Wang 08/2023 - 11/2023

* 独立完成网络威胁情报（CTI）的知识库的构建和基于CTI报告构建知识图谱的代码工作，构建细粒度攻防知识图谱，为探索基于知识辅助决策的恶意流量智能处置新技术打下基础
* 使用多种模式识别和NLP技术，如AC自动机算法（Aho-Corasick algorithm）和词性标注（Part-Of-Speech Tagging），进行提取CTI报告中新实体的任务，精确率(precision)达90.3%
* 使用Sentence BERT模型进行实体间关系的提取，精确率大83.8%

**URL-Based Phishing Website Detection** Institute of Information Engineering, CAS Advised by Dr. Peng Zhang 05/2023 - 08/2023

*Independent Study*

* 独立搭建了一个名为AccuRapidGuard的URL检测模型，使用了并行CNN、GRU、注意力机制和全连接层。
* 在达到与baseline模型的performance相差无几的前提下（准确率Accuracy达98.3%），运行效率提高了至少34.93%，速度大幅提高。
* 发表了一篇名为AccuRapidGuard: Advancing Phishing Website Detection with High Performance and Efficiency的论文

**Visual Configuration of Smart Switches and Appliance Connections** Advised by Dr. Wei Ke 10/2022 - 04/2023

*Team Leader, 2022 National College Student Innovation and Entrepreneurship Training Program*

* 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

**Automatic Style Conversion System for Road Scene Video Images** Advised by Dr. Yaochen Li 西安交大 11/2021 - 05/2022

*2021 National College Student Innovation and Entrepreneurship Training Program*

* 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**

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

使用SpringBoot、MyBatis、Redis、MySQL、Vue+ElementUI以及axios等，实现了一个包含物流管理系统，实现基本资料模块、查询统计模块、市场管理模块、配送管理模块、财务管理模块等主要功能的虚拟物流管理系统

Team Leader,基于WebSocket的安全通信软件 09/2022-010/2022

基于RSA/AES加密算法与WebSocket协议通信，使用VUE+SpringBoot框架搭建的安全通信软件

简化版类C高级程序设计语言的编译系统 03/2023-05/2023

使用C语言编写了针对一个简化版的高级程序设计语言编译系统，不仅可生成中间代码，而且具有一定的出错处理能力，还能够展示符号表的使用。

**INTERNSHIP EXPERIENCE**

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

* 得到了充分的大数据处理和分析的训练，如在Ubuntu环境中构建Hadoop集群，使用Hive进行大数据存储与管理，使用PySpark进行大数据处理与分析，使用Zeppelin实现交互式数据可视化
* 在实习过程中，我参与了网站系统的推荐功能的开发，利用K-Nearest Neighbors算法（KNN），实现了相似好友推荐功能

**HONORS & AWARDS, EXTRACURRICULAR ACTIVITIES**

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

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

School Third Scholarship 09/2023

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