

Qi Sun

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Xian Jiaotong University, No. 28, Xianning west Road, Beilin District, Xian, Shaaxi, China

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 | Major GPA: 86.89/100

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, NO.: 2023SR0797934, Jul. 05, 2023

RESEARCH EXPERIENCE

Research on Adaption between Pretext Vision Representation and Downstream Object Perception

10/2023-Present

Research Assistant, Xi'an Jiaotong University Advised by Prof. Wei Ke

- Aim: 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 tasks of compression and lightweighting of large models based on ViT
- Attempting to use knowledge distillation and network architecture design optimization to reach the goal

Intelligent Disposal Techniques for Malicious Traffic in Large-Scale Networks

08/2023-11/2023

Summer Research, Central South University Advised by Prof. Jianxin Wang & Prof. Weiping Wang

- Completed a model to extract Structured Threat Information eXpression(STIX) entities and generat knowledge graph from unstructured Cyber Threat Intelligence(CTI) reports.
- 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(STIX Relationship Objects, SRO) and gained an accuracy of 83.8%

URL-Based Phishing Website Detection

05/2023-08/2023

Independent Study, Institute of Information Engineering, Chinese Academy of Sciences Advised by Prof. Peng Zhang

- Built an URL-based phishing detection model named AccuRapidGuard utilizing parallel CNN, GRU, and multi-head attention mechanism
- Reached a significant speed-up by 34.93% while the accuracy was close to that of the SOTA models.
- Published a paper "AccuRapidGuard: Advancing Phishing Website Detection with High Performance and Efficiency"

Visual Configuration of Smart Switches and Appliance Connections

10/2022-04/2023

Team Leader, 2022 National College Student Innovation and Entrepreneurship Training Program Advised by Prof. Wei Ke

- 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

11/2021-05/2022

Research Member, 2021 National College Student Innovation and Entrepreneurship Training Program Advised by Prof. Yaochen Li

- 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+ College Students Innovation and Entrepreneurship Contest
- Obtained computer software copyright registration certificate in July 5th 2023

ACADEMIC INVOLVEMENTS**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

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

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

Operation System: Linux, Windows