Zhihua Yang

Syracuse, NY 13210 | (315) 992-3143 | zyang47@syr.edu | https://github.com/snail-inO

EDUCATION

Syracuse University - College of Electrical Engineering & Computer Science, Syracuse, NY   August 2021 - May 2023
Master of Science in Computer Engineering
- Selected courses: Advanced Computer Architecture, Object Oriented Programming C++, Advanced Data Structure and Algorithm, Object Oriented Design, Blockchain Foundation & App, Internet Security, Intro to AI, Biometrics

South China Agricultural University - College of Engineering, Guangzhou, Guangdong,   September 2013 - September
China   2017
Bachelor of Engineering in Automation
- Relevant courses: C Programming, Digital Image Processing, Principles & Application of Microcomputer, Principles of Automatic Control, Single-Chip Principles and Interfacing

EXPERIENCE

Research Assistant, College of EECS, Syracuse University – Syracuse, NY   October 2022 - Present
- Design and implement a safe refund module for Uniswap v3 utilizing existing transaction verification tool, offers an interface for refunding accidentally transferred tokens to original sender
- Solve a Satisfiability Modulo Theories problem related to an existing vulnerability in blockchain node memory pool mechanism by using Programing Z3
- Complete assigned tasks with efficiency, clarify and prompt tasks objectives and progress with lab teammate through discussion and collaboration

Embedded Software Engineer, iSoftStone Corporation – Shenzhen, Guangdong, China   October 2018 - May 2019
- Maintained, developed, and debugged power management module and Wi-Fi module of telematics collaborating with hardware department
- Completed more than 20 function requests development to fulfill different needs of specific implementation, such as updating ethernet driver with new third-party vendor driver, modified power module functions to adapt buyer's requirements
- Led a team to review and rectify code format over 30,000 lines of codes, accelerated rectification process, and accomplished department's requirements

PROJECT

Online AI Chinese Chess Game   August 2022 - Present
- Integrate AI using Monte Carlo Tree Search algorithm with a Convolutional Neural Network into an Online Chinese Chess Game Web App and attain a reasonable performance during human-AI competition
- Ensure robustness and extensibility of application utilizing Spring Boot framework, design patterns, and three tier software architecture
- Apply agile workflow by achieving CI/CD and load balancing with Docker container technique, Kubernetes, and Git VCS
- Construct frontend with HTML, CSS, TypeScript, and React, use STOMP for WebSocket enables messaging between frontend and backend to achieve real-time dynamic update

Content Verification System Based on Blockchain   October 2022 - Present
- Address trust issue on internet information with an Ethereum blockchain content verification system applies governance, time lock, ERC 1155 protocols/designs written in Solidity language
- Increase reusability, compatibility, and standardization of code through including OpenZeppelin contract and test-helpers libraries in project
- Enhance reliability of system by devising unit tests and system test with Truffle tool suite corresponding to predesigned use cases and system architecture

TECHNICAL SKILLS

- Programming Languages: C, C++, Java, HTML, JavaScript, Solidity, Shell script, Python
- Programming Techniques: Data structure and algorithm, Operating System Concepts, Spring, Maven, Web Development, Java ORM, Object-oriented Design, Linux Programming, Relational database, NoSQL, VCS, Docker, React, Internet Security, Junit, AWS/GCP, Kubernetes, AI & NN, Blockchain Programing, Biometrics