YINGQING CHEN

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EDUCATION

South China University of Technology (SCUT)	**Guangdong, China**
· Bachelor of Engineering in Information Security	*Sept. 2017 - Present*

RESEARCH EXPERIENCE

Smart Contract Vulnerability Detection, SCUT	*Jan. 2021 - Present*
Research Assistant	*Advisor: Professor Lu Lu*

· Proposed to develop a system which could detect vulnerabilities in smart contracts with machine learning.
· Simplified datasets of smart contracts by turning bycodes into opcodes and abstracted the features.
· Applied Long Short-Term Memory (LSTM) and Transformer model to build the vulnerability detection models.

JPEG Image Encryption, SCUT	*Mar. 2019 - Nov. 2019*
Research Assistant	*Advisor: Professor Junhui He*

· Researched on the methods of JPEG image encryption based on bitstream for improved format compatibility.
· Adapted an encryption techniques toward DC and AC codes to preserve the file size of encrypted JPEG images.
· Designed a software of picture viewing with various image processing functions.

Blockchain Infrastructure Research and Application, SCUT	*Mar. 2018 - Mar. 2019*
Research Assistant	*Advisor: Professor Shaohua Tang*

· Collaborated with graduates to construct a blockchain project to realize the bank notarization application.
· Built up a mini blockchain system using Unspent Transaction Outputs (UTXO) and proof-of-work protocol.
· Developed blockchain smart contracts and deployed them on Hyperledger Fabric.

OTHER PROJECTS

Study Led by Circles, SCUT	*Nov. 2019 - Apr. 2020*
Team Leader	

· Built a WeChat applet which provided a platform for college students to consult on campus doubts.
· Designed the database of courses and questions set and realized the query with improved searching efficiency.
· Used WXML framework and HTML5 technology to design the user interface.

Study on Optimal Control of High Pressure Oil Pipe, SCUT	*Sept.2019*
Team Leader	

· Built a flow balance model and a fuel compression model to keep the pressure in the tubing stable.
· Applied the compressible fluid flow analysis to establish the geometric fuel supply model of plunger cam.
· Adopted Proportion Integral Differential (PID) control principle for cooperation of oil supply and injection.

AWARDS AND HONORS

Second prize in Wechat App Development Competition of South China	*2020*
Third prize in Chinese Collegiate Computing Competition	*2020*
Anjubao Scholarship (4 out of 49)	*2020*
Merit student of SCUT	*2020*
Outstanding student cadres of SCUT	*2020*
Third prize in Contemporary Undergraduate Mathematical Contest in Modeling in China	*2019*
Third prize in Youth Talents International Innovation and Entrepreneurship Competition	*2019*
One star volunteer in Guangdong Province	*2019*
Excellent secretary of Computer Science and Engineering Student Union	*2018*

ACTIVITIES

Monitor of Information Security class	*2017 - 2021*
Vice Minister of Academic and Research Department, Red Keyboard Organization	*2018 - 2021*
Secretary of Public Relations Department, Computer Science and Engineering Student Union	*2017 - 2018*

SKILLS

Programming Languages	Python, C, C++, Java, Kotlin, Matlab, Javascript, HTML, CSS, MySQL
Tools	Microsoft Visual Studio, PyCharm, Intellj IDEA, Dreamweaver, Android Studio