

# Lu Chu

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## Technical Skills

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### Programming Language

- C/C++
- Python
- Qt/QML

### Software

- Latex
- Git
- Linux/MacOS

### Machine Learning

- pytorch
- Tensorflow/Keras
- sklearn

## Education

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**East China Normal University    School of Computer Science and Software Engineering**  
July, 2019

*Mater – Cryptography and Cyber Security*

**ChangShu Institute of Technology    School of Computer Science and Engineering**  
July, 2015

*Bachelor – Internet of Things*

## Research Project

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**Group Attributes Context-aware Password Guessing Scheme    November, 2017 – Present**

- Analyzed the defects and shortcomings of traditional password attack algorithms(PCFG and Markov).
- Proposed a weak password guessing method based on deep recurrent neural network.
- Combining user group attributes, we proposed a conditional RNN targeted weak password guessing technique.
- Performing related experiments on leaked password sets such as Rockyou, CSDN, and 12306, and we analyzed the experimental results.

**Generative Adversarial Networks Based Industrial Control System Protocol Reconstruction    September, 2017 – October, 2017**

- Analyzed the necessity of reconstruction of industrial control protocols in fog computing scenarios.
- Convert industrial control protocols to gray scale images and analyze protocol features.

- Reconstruction of Industrial Control Protocol using DCGAN.

### **An Adversarial Sample Based Attack Method for Malware Detection** **April, 2017 – August, 2017**

- Analyzed the problem of confrontational samples facing deep learning and traditional machine learning.
- Proposed a technique based on genetic algorithm to efficiently find the adversarial samples.
- Performed related experiments and analysis in malicious PDF file detection system.

## **Student Teams**

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### **Student Council Minister** **July, 2017 – Present**

- Organized the promotion and planning of student union activities.
- Organized academic activities.

### **Teaching Assistant** **September, 2017 – January, 2018**

- Participated in the teaching of computer programming courses.
- Assisted the teacher to complete the Q&A work.

## **Work Experience**

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### **Pioneer Suntec(ShangHai) Electronic Technology Co., Ltd** **January, 2015 – July, 2015** **C++ Programmer**

- Participated in the development of embedded software for in-vehicle electronic systems.
- Maintaining related documents and learn to use QML.

### **Suzhou C2fun Network Technology Co., Ltd** **September, 2015 – March, 2016** **Game Developer**

- Participate in "Three Kingdoms" development work.
- Participate in the optimization and development of the company's game engine.

## **Intrests**

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- Reading – I like Wang Xiaobo's "The Golden Age", Yu Hua's "Living", and Zhang Yueran's "The Skull".
- Algorithm – I like to study machine learning and like to read Bishop's classic book "Patter Recognition and Machine Learning". I also shared my reading notes, please refer to my github.
- Sports – Pingpong, badminton.