Haodi Wang

Research Area: Zero-knowledge Proof, Privacy Preservation

TEL: (+86) 15710068793 E-mail: lirawang@foxmail.com

Date of Birth: February. 1996

Education Background

Beijing Normal University 09/2020-Present

- First year of PhD candidate, recommended;
- Research Area: Zero-knowledge proofs

Beijing Normal University 09/2018-08/2020

- Master of Computer Science, recommended;
- Research Area: Deep learning and computer vision;
- GPA: **3.96 out of 4.0.**
- Rank: **1 out of 30**

Beijing Normal University 09/2014-08/2018

- Bachelor of Science in Computer Science, Department of Artificial Intelligence;
- GPA: **3.85 out of 5.0**
- Rank: **6 out of 54**

Research Projects

Research on the proof of deep learning model by zero-knowledge proof 03/2020-01/2021

- Construct and train the mnist-demo/LeNet-5/AlexNet/VGG16 model;
- Give detailed principle and operation of CNN model
- Cooperate with SECBIT Labs for the paper (under review).

Research on the batch Plonk zero-knowledge proof scheme 11/2020-Present

- Construct the main idea of this project
- Draft the paper (revising)

Research on the Halo 0.9 zero-knowledge proof protocol 12/2020-01/2021

- Construct the main idea
- Report this work on Cryptology ePrint Archive: https://eprint.iacr.org/2020/1573

Research on the privacy-preserving deep learning model 12/2020-Present

- Construct the main idea of this project, it's an ongoing research and still needs to be revised.

Research on image inpainting with generative adversarial network 09/2018-12/2019

- Using GAN network and multi-discriminators for image inpainting;
- Publish a conference paper and attend to the conference in April, 2020.

Research on image inpainting with text recovery and residual learning 09/2018-08/2019

- Publish journal papers as co-authors.

Research Achievements

Halo 0.9: A halo protocol with fully-succinctness	Preprint	Cryptology ePrint Archive, Report 2020/1573, https://eprint.iacr.org/2020/1573 (2020)
Semantic Inpainting with Multi-Dimensional Adversarial Network and Wasserstein Distance.	Conference paper	3rd Chinese Conference on Pattern Recognition and Computer Vision
Multi-scale semantic image inpainting with residual learning and GAN.	journal paper	Neurocomputing, 2019, 331(9252312):199-212
Text recovery via deep CNN-BiLSTM recognition and Bayesian inference.	journal paper	IEEE Access, 2018, 6(21693536):76416-76428

Skills and Certificates

- Programming language: Python, Rust, PostgreSQL, MySQL;
- Platform: Keras, Tensorflow, libsnark;
- TOEFL: 103;
- GRE Score: Verbal 157, Quantitative 166, Writing 3.5.

Summer School Workshop

University of California, Berkeley 07/2018-08/2018

- Course: The person in big data, **93.48 out of 100;**
- Course: Academic writing, **95.49 out of 100.**

Teaching Assistant Experience

Beijing Normal University, Principle of Database System 2019 Fall, 2020 Fall

- Teach experiment classes for nearly **60 class hours** by now;
- Help undergraduate students with the operation of PostgreSQL;
- Assist in correcting experiment results and tested papers.

Beijing Normal University, Deep Learning 2018 Fall

- Teach undergraduate students about the basic concepts in convolutional neural network;
- Help undergraduate students with the operation of python and toy-models;
- Assist in correcting programming errors and results in homework.

Other Experience

Monitor of postgraduate class 09/2018-08/2020

- Successfully organized several activities, including the journey to XiangShan, Beihai Park etc.;
- Assist my classmate in their daily lives;
- Practiced communication skills and enhanced the sense of responsibility.

Honor & Award

- The **First prize** of the scholarship for New Graduate Students of Beijing Normal University, 2018;
- The **First prize** of Academic Scholarship for Graduate Students of Beijing Normal University, 2019;
- The **First prize** of Academic Scholarship for Graduate Students of Beijing Normal University, 2020;
- The **Outstanding student cadres** of Beijing Normal University, 2019;
- **Merit Student** and **Outstanding Members** of Beijing Normal University.