Yuhao Zhou

Shanghai Jiao Tong University, 800 Dongchuan Road, Shanghai, 200240, China
yuhao_zhou95@sjtu.edu.cn • +86 13916703397

EDUCATION

Shanghai Jiao Tong University, Shanghai, China

- B.Eng. in Computer Science — Sep 2014 – PRESENT
  - **ACM Honored Class**, Zhiyuan College
- Honors & Awards
  - Third-class school outstanding student scholarship — 2015 & 2016
  - Honorary Scholarship of Zhiyuan College — 2015 & 2016
- Selected Courses:
  - Cryptography, Probability Theory, System Design, Nature Language Processing
  - Programing Language and Logic, Deep Learning, Algorithm Design and Analysis

WORK EXPERIENCE

Microsoft Research Asia, Beijing, China

- Full Time Intern, System Group — Aug 2017 – PRESENT
- **Project**: Developing Visual Studio Plugin in Collaboration with STCA
  - Developed high efficient deep learning environment for researchers as well as basic users
  - Implemented model converter for various deep learning frameworks, including Keras, Tensorflow, CNTK, MXNet, Coreml, Pytorch etc.
  - Inner version for MSR, open-source as **MMdnn** on github, and will merge with **onnx** in the near future.
- **Project**: Optimizing Job Scheduling on Cluster for Deep Learning Job
  - Case study on Philly 2,000 CNTK Jobs to dump training parameters and data
  - Keep developing automatic analysis tool to figure out human adjustment after killing deep learning jobs to increase resource utilization
  - The idea of creating new interaction system interface and re-designing scheduling strategy to cater to the balance of cluster fairness and utilization

RESEARCH EXPERIENCE

Cornell University, Ithaca, NY, US — Jul 2017 – Aug 2017

- **Supervised by** Prof. Elaine Shi
- **Project**: Implementation of Distributed Consensus Protocol in Sleepy Model
  - Adopted a leader election protocol to refrain from such idea with static corruption and synchronized clocks
  - Analyzed the chain consistency or chain quality through designing the naive attack and selfish mining attack on Sleepy Consensus Model
  - Introduced simulators components for implementation of distributed consensus protocol
  - Conducted several experiments with different parameters to validate the design

LoCCS Laboratory, SJTU, Shanghai, China — Jun 2016 – Jun 2017

- **Supervised by** Prof. Dawu Gu & Yuanyuan Zhang
- **Project**: Investigations on Trusted Execution Environment on Mobile
  - Researched on safety mobile environment such as ARM TrustZone in Android development environment
  - Cooperated with hardware companies such as Smartisan Tech & Huawei to perform hardware safety test
  - Succeeded in protecting the REE side from the TEE side of the application

COMPUTER SKILLS

- Programming Skills: Java, C++, C#, Python
- Professional Skills: IDA pro, Apktoolkit
- Other Skills: LaTeX, Adobe Photoshop/ After Effect/ Premiere

INTERESTS

- Research Interests
  - Security, System, Theory of Computing
- Other Interests
  - Photography, Sports(Basketball, Tennis, Badminton), Art Design

SELECTED COURSE PROJECT

Operating System Sep 2016 – Jan 2017

- Design HTTP Server
  - Designed a simple HTTP Server to handle C10K issues
  - Compared performance of Apache2 and Nginx at evaluation stage
  - Implemented and compared poll epoll event engines in a threat poll

Deep Learning Sep 2016 – Jan 2017

- Tone Classification with Different Neural Network Models
  - Constructed a Chinese tone classifier based on small training dataset
  - Achieved 92% accuracy in the test dataset via processing and optimizing models based on existing data
  - Analyzed performance differences among MXNet, Torch and Theano frameworks

Nature Language Processing Mar 2017 – Jun 2017

- Pinyin-to-Chinese Character Conversion
  - Implemented model using bi-direction recurrent neural network to convert Pinyin to Chinese Character
  - Utilized OpenNMT toolkit to enable a neural machine translation system
  - Achieved overall 68.1% accuracy when compared with Google IME and baseline

Database Mar 2017 – Jun 2017

- Design and implement of a database system for an Airbnb-like system
  - Designed and created a database to organize and store data about the track system
  - Implemented user interface with JAVA, while using SQL for query restriction
  - Created a web portal for the Airbnb-like system to provide various functionalities