

Yue CUI

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EDUCATION

University of Tennessee, Knoxville (UTK)

Aug. 2021 - Expected May. 2026

- **Phd in Computer Science, Advised by Dr. Jian Liu**
- **Research Interest:** Mobile Computing and Security

University of Electronic Science and Technology of China (UESTC)

Sept. 2017 - Jun. 2021

- **BEng** in Computer Science and Technology ("Internet+" Elite Class), **BEcon** in Finance
- **GPA:** 3.92/4.0 (88.83/100)

TECHNICAL SKILLS

- **Programming:** Python, MATLAB, C, Verilog, SQL, Java
- **Devops:** Anaconda, Jupyter Notebook, Pycharm, IDEA, Unity, Vivado
- **Machine Learning Framework:** Keras, Tensorflow, PyTorch
- **English Proficiency:** IELTS 7.0, GRE 320

RELATED RESEARCH EXPERIENCES

EMG Gesture Recognition with Games for Upper-limb Rehabilitation

Dec. 2020 – Mar. 2021

Developer

- Collected EMG data from Myo armband, then extracted feature from time domain and frequency domain.
- Programmed various classifiers including KNN/CNN/SVM, tested on our datasets, and achieved 89% accuracy.
- Used gestures for python-game operations to help upper-limb rehabilitation.

Vehicle-key: Key Generation for LoRa based IoV Communications

Nov. 2020 – Jun. 2021

Developer

- Explored the feasibility of LoRa-enabled physical layer key generation for Internet of Vehicle (IoV) scenario.
- Designed a complete workflow including key probing phase, key generation phase and encrypted communication.
- Conducted real-world experiments and showed that our Vehicle-key outperforms the state-of-the-arts methods in terms of key generation rate, key agreement rate, and security.

RadarNet: Radar Echo Two-dimensional Doppler Image Jamming Detection

Oct. 2020 – May. 2021

Research Assistant, Co-advisors: Prof. Jun Zhou (National 1000-Person Program) & Prof. Liang Chang

- Programmed various neural network including CNN/ShuffleNet/MobileNet using Keras, and tested on our datasets(including different types of terrains, jams and various levels of white noise).
- Researched on model structure design and compression for ultra-low time and space complexity.
- Implemented neural network on embedded system: Field Programmable Gate Array (FPGA).

Website Classification Based on Recurrent Neural Network for Focused Crawler

May. 2020 – Aug. 2020

Research Internship in China Telecom, Co-advisors: Prof. Junming Shao (UESTC) & Ms. Li Deng (China Telecom)

- Pre-processed data collected from DMOZ dataset, including normalizing data format and segmenting text data.
- Generated features by word-embedding method (TF-IDF) and used the TF-IDF weight method to score and rank those features in the corpus so as to pick over the top 25% as the representative features.
- Implemented classifiers with the representative features by using SVM, Random Forest, GNB, and so forth.
- Enhanced the classifier's performance by neural network methods (CNN, RNN, LSTM and GRU).

Semantic Recognition based Dialogue Robot

Aug. 2019 – Dec. 2019

Research Internship in Huawei Technologies Co., LTD, Advisor: Prof. Junming Shao (UESTC)

- Built a question-answer system under Chatterbot frame, enhancing the efficiency of providing answers with high-quality according to the user search requests.
- Implemented the part of question generation by: 1) identifying keywords based on segmenting and tagging by spaCy, extracting features from SQuAD dataset, and classifying with Naive Bayes, 2) emptying the hypothetic answers, 3) transforming the text into interrogative sentences by Seq2Seq neural network.

Game Development: A 2D Puzzle Game named Elizabeth using Unity Engine

Sept. 2018 – Jul. 2019

Game Developer in Neutron Star Game Studio

- Realized the game modules using C# on the Unity engine and provided art-assets materials by Photoshop.
- Released the game on STEAM(PC)/ TapTap(Android)/ APP store(iOS) by Gamera Game.

HONORS & AWARDS

Scholarship

- Tennessee's Top 100 Fellowships (\$10,000 per year) Apr. 2021
- Merit-based Outstanding Student Scholarship (Top 15%, 1500CNY) Oct. 2020
- Merit-based Excellent Student Scholarship (Top 20%, 1000CNY) Oct. 2019
- Merit-based Outstanding Student Scholarship (Top 15%, 1500CNY) Oct. 2018

Others

- Third Place (Province), Chinese Undergraduate Computer Design Contest May. 2021
- Second Place (Province), National College Student E-commerce "Innovation, Creativity, and Entrepreneurship" Challenge Competition May. 2021
- Second Place (Inter-school), "Internet+" College Student Innovation and Entrepreneurship Competition Jul. 2020
- The Outstanding student of 2019, School of Computer Science and Engineering Jan. 2020

EXTRACURRICULAR ACTIVITIES

Teaching Assistant (Part-time) , Virtual simulation of Unmanned Aerial Vehicle (UAV)	May. 2019
Participant , French-Swiss University Exchange Summer Camp	Jul. 2018 – Aug. 2018
Head of Propaganda Department , "Internet +" Student Union, UESTC	Sept. 2017 – Aug. 2018