





# Feng Yu

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## Education

- Sep 2023 – Present **Ph.D. student**, Computer Science, University of Exeter, Exeter, U.K.  
Research interests : Federated Learning, Continual Learning, Edge Artificial Intelligence.  
Advisor : Dr. *Jia Hu* and Prof. *Geyong Min*.
- Sep 2020 – Jun 2023 **M.Eng.**, Cyberspace Security, Fujian Normal University, Fuzhou, China. **GPA** : 87.88/100.  
Research interests : Federated Learning, Edge Computing and Privacy.  
Advisor : Prof. *Hui Lin* and Prof. *Xiaoding Wang*.
- Sep 2016 – Jun 2020 **B.Eng.**, Computer Science and Technology, Hunan University of Science and Technology, Xiangtan, China, **GPA** : 3.34/4.0.

## Publications

- > **Feng Yu**, Hui Lin, Xiaoding Wang, et al. Communication-efficient personalized federated meta-learning in edge networks[J]. IEEE Transactions on Network and Service Management, 2023.
- > **Feng Yu**, Hui Lin, Xiaoding Wang, et al. Blockchain-empowered secure federated learning system : Architecture and applications[J]. Elsevier Computer Communications, vol. 196C, 2022, pp. 55-65.
- > **Feng Yu**, Qingxin Lin, Hui Lin, Xiaoding Wang, Privacy-enhanced federated learning scheme based on generative adversarial networks[J]. Chinese Journal of Network and Information Security, 2023, 9(3) : 113-122.
- > Ankita. Sharma, Shalli Rani, Moayad Aloqaily, Syed Hassan Ahmed Shah, Rohit Sharma, **Feng Yu**, Mohammad Mehedi Hassan, An Efficient Hybrid Deep Learning Model for Denial of Service Detection in Cyber Physical Systems[J], IEEE Transactions on Network Science and Engineering, 2023.

## Patents and Software

- > **Feng Yu**, Hui Lin, Xiaoding Wang, A new type of sports hairband [P]. Utility model patent, Fujian Province : CN214904410U, 2021-11-30.
- > Jieyu Yang, Lei Jiang, **Feng Yu** et al., "LSTM-based article intelligent generation system", Computer Software Copyright, Hunan University of Science and Technology, 2019SR1143843.
- > Bowei Zhang, Wenhua Song, Xiaoliang Wang, **Feng Yu**, "Kuang-Chi Security Cloud Monitoring and Early Warning System for Meeting Cars on Curves", Computer Software Copyright, 2019SR0274946.
- > Qian Chen, Qiongbai Zhang, Jieyu Yang, **Feng Yu** et al., "Hele Yiren Pilot Mutual Assistance Platform", Computer Software Copyright, Hunan University of Science and Technology, 2019SR0545706

## Projects and Experiences

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|----------------------|--|
| Sep 2022<br>Jun 2022 | <b>Software Development Intern, Lenovo Computer Technology Co. LTD, Shanghai</b> <ul style="list-style-type: none"><li>&gt; Responsible for ESXI VM and LXCA installation automation script programming; Familiar with Git, Maven, Jenkins, shell and PowerShell script syntax;</li><li>&gt; Learn the BMC, IPMI, Redfish, LXCA platforms, and the use of Jira and Bugzilla; Master LXCA CFC project back-end code workflow, solve several bugs in CFC project;</li><li>&gt; Build CFC Server prompt functionality with the Dojo framework; Lean the programming and development of Server Configuration Pattern function module;</li><li>&gt; Design and create the <b>log platform</b> based on ELK and Kafka cluster (3 nodes), and further optimize Kafka performance.</li></ul> <div style="display: flex; gap: 5px;"><span>Shell/Java/Python/Web programming</span><span>BUG fix</span><span>Log platform</span></div> |
| Jun 2020<br>Dec 2019 | <b>Application of recommendation algorithm based on RL, HNUST, Undergraduate Graduation Thesis</b> <ul style="list-style-type: none"><li>&gt; Develop the collaborative algorithms via matrix factorization and bandit algorithms;</li><li>&gt; Apply Python to extract preference features from movie data and propose a novel recommendation algorithm based on the idea of gambling machines.</li></ul> <div style="display: flex; gap: 5px;"><span>Python</span><span>Reinforcement Learning</span><span>Recommendation algorithm</span><span>Collaborative Filtering</span><span>Bandit algorithm</span></div>  |
| May 2019<br>Jun 2018 | <b>Service account development, HNUST, Team leader</b> <ul style="list-style-type: none"><li>&gt; Participate in the back-end development of the <b>College's Alumni Association service account</b>;</li><li>&gt; Responsible for the back-end development, front-end and back-end test docking and service launch of the <b>Waku Yiren pilot mutual aid service account</b>.</li></ul> <div style="display: flex; gap: 5px;"><span>Java/Web programming</span></div>   |

Oct 2018	Text Intelligence Challenge, Dagan Data, Team member
Jul 2018	
	<ul style="list-style-type: none"> <li>&gt; Build a model to predict the category of text through the body of long text data;</li> <li>&gt; Apply machine learning algorithms (such as SVM, TF-IDF, XGBoost, etc.), and obtain a <b>Top 10% score</b>.</li> </ul>
	<div>Python</div> <div>SVM</div> <div>TF-IDF</div> <div>XGBoost</div> <div>Ensemble Learning</div>
Jun 2018	ACM-ICPC training team, HNUST, Team member
Dec 2016	
	<ul style="list-style-type: none"> <li>&gt; Master <b>basic data structure</b>, such as stack, queue, linked list, binary tree, graph, and lookup set, tree array, line tree, bisect graph, etc.</li> <li>&gt; Master <b>basic algorithms</b>, such as dichotomy, DFS, BFS, dynamic programming, shortest path algorithm, etc.</li> </ul>
	<div>Data Structure</div> <div>Algorithm</div> <div>C++</div> <div>Java</div> <div>Python</div>

## Teaching

- > Computer Networks, Teaching Assistant, 2020.09 – 2021.01.
- > Programming Experiment (**Data structure** and **C/C++ programming**), Teaching Assistant, 2017.09 – 2019.06.
- > Advanced Mathematics and Professional Basic Courses, Assistant Class Teacher, 2017.09 – 2018.06.

## English Language

College English Test Band 4 : 489    IELTS : 6.5  
College English Test Band 6 : 432

## Skills

**Programming Language :** C/C++, Python, Golang, Java, SQL, HTML, CSS, JavaScript, Bash.  
**Frameworks & Tools :** Git, PyTorch, TensorFlow, FATE, FedLab, Flower, FISCO BCOS, Numpy, Pandas, Scikit-learn, CUDA,  $\LaTeX$ , Flask, Elasticsearch, Logstash, Kibana, Kafka, SpringBoot, React, Angular, Docker, Redis.  
**Certificates :** Intermediate Software Designer, **CCF Certified Software Professional Top 10%**, Sep 2018.

## Main Honors and Awards

2023    China Scholarship Council and University of Exeter Scholarships.  
2022    **Second-class Academic Scholarship** of Fujian Normal University.  
2020    **Outstanding Graduate** of Hunan Province (3%, 18/518), Outstanding Graduate of HNUST (3%).  
2020    **Outstanding Undergraduate Graduation Thesis** of College.  
2017 & 2019    **National Encouragement Scholarship** (twice), **Outstanding Student Leader** of HNUST.  
2017 - 2019    **First prize** of HNUST(twice), **Second prize** of HNUST, **Merit Student** of HNUST(twice), **College Merit Student Model**.  
2018    **Third prize** in Hunan Division of "Ladder Competition" of Chinese universities.  
2018    **Second prize** of "Lanqiao Cup" Hunan Province (twice, C++ and Java).  
2018    **Bronze Prize** of CCPC Invitational Competition and the 10th Xiangtan Program Design Competition.  
2018    **First prize** of National College Students Electronic Creative Innovation Competition in the national preliminary competition, **Second prize** in the final competition.  
2017    **Second prize** in Undergraduate programming competition of HNUST.  
2015    **Second prize of Hubei Province** in National Mathematics League for High School Students.

## Interests

**Sports :** Running, Cycling, Climbing, Badminton, Table Tennis, Basketball, Extreme Sport.  
**Misc :** Travelling, Writing and Learn new technologies, such as federated learning, continual learning, generative adversarial network, deep reinforcement learning, meta learning, recommendation system and related applications.