Qi Wu

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EDUCATION

Hunan University (HNU), Hunan, China   09/2017-present
Master's Degree in Software Engineering
Overall GPA: 3.58/4.0 (88.7/100)
Core courses: Design and Analysis of Algorithms, Software Analysis and Evaluation, Embedded System, etc.

Central South University of Forestry and Technology (CSUFT), Hunan, China   09/2013-06/2017
Bachelor's Degree in Automation Engineering
Overall GPA: 3.81/4.0 (91.2/100)   Ranking: 1/111

LANGUAGE & SKILLS

- English: Good in Reading , Writing, Speaking and Listening;
- Software: Latex, Origin, Visio, Markdown, Git, Matlab, Altium Designer, Quartus II, Proteus, AutoCAD, Axure, Photoshop, XMind;
- Programming: C, C++, Python, JavaScript, SQL.

PUBLICATIONS & PATENTS

Paper

- Chen, H., Xu, J., Xiao, G., **Wu, Q**., & Zhang, S. "Fast Auto-clean CNN model for Online Prediction of Food Materials", *Journal of Parallel and Distributed Comput*ing, 117 (2018): 218-227.
- Zhou, G., **Wu, Q**., & Chen, A. "Modification of Cellular Automata (CA) used in Forest Fire Spreading", *Journal of Scientific Instrument*, 38(2017), pp.288-pp.294. (Corresponding Author)
- Zhou, G., **Wu, Q.**, & Chen, A. "A forestry Fire Spatial Diffusion Model Based on the Integration of Multi-agent Algorithm with Cellular Automata", *Journal of System Simulation*. (accepted) （Corresponding Author）
- Xiao, G., Zhang, S., Chen H., **Wu Q**., Guo J., & Gong Z., "Order-CNN: Integrity Classification and Order-specify Food Materials Recognition for Personal and Data Integrity in Food Industrial", *IEEE Transactions on Industrial Informatics*. (under review)

Patent

- **Wu, Q**., Xiao, G., Wang, H., Zheng, H., He Z., & Chen, H. A model for automatically cleaning food materials pictures and a method for classifying food materials category. CN201710776039.6. (Patent Application for Invention Entering the Substantive Examination Stage, Application date: 09/2017.)
- Xiao, G., **Wu, Q**., Liu, H., Liu, Y., Huang, Z., & Chen, H. A method of standard catering receipt based on image recognition. CN201810222848.4. (Patent Application for Invention Passing Preliminary Examination Stage, Application date: 04/2018.)
- Xiao, G., Liu, H., Liu, Y., **Wu, Q**., Huang, Z., & Chen, H. A method for large-scale food image classification based on migration learning. CN201810332217.0. (Patent Application for Invention Passing Preliminary Examination Stage, Application date: 04/2018.)
- Wang, H., Xiao, G., **Wu, Q**., Cai, S., & Chen, H. A model and method for on-line incremental food

materials prediction. CN201710773251.7. (Patent Application for Invention Passing Preliminary Examination Stage, Application date: 08/2017.)

Software Copyright
- **Wu, Q**., Mo, X., Chen, Y., Huang, Z., He, Z., & Zhang, C. NIR fresh detection platform. CN2018SR434605, 11 June, 2018. (Granted)
- **Wu, Q**., Liu, H., Liu, Y., Huang, Z., & Hunan Luchuan Information Technology Co., Ltd. Restaurant standard integrity receiving system. CN2018SR195825, 22 March, 2018. (Granted)
- Hunan Luchuan Information Technology Co., Ltd, Liu, Y., **Wu, Q**., Huang, Z., & Liu, H. Large-scale mall membership management system. CN2018SR219471, 29 March, 2018. (Granted)
- Hunan Luchuan Information Technology Co., Ltd, Huang, Z., Liu, Y., **Wu, Q**., & Liu, H. Electronic detonation blasting system. CN2018SR223834, 30 March, 2018. (Granted)
- Hunan Luchuan Information Technology Co., Ltd, Liu, Y., Liu, H., Huang, Z., & **Wu, Q**. Hechang lease management system. CN2018SR198998, 23 March, 2018. (Granted)
- **Wu, Q**., Wang, H., He, Z., Zheng, H., Hu, C., & Wang, Y. Canzhi image recognition platform. CN2017SR496917, 07 September, 2017. (Granted)
- Wang, H., **Wu, Q**., Cai, S., Qiao, R., & Peng, Y. Restaurant intelligent receiving platform. CN2017SR497207, 07 September, 2017. (Granted)

RESEARCH EXPERIENCES

Research on Near Infrared Spectrum Data Intelligent Analysis and Multi-dimensional Feature Modeling Algorithm under Cloud Environment   03/2018-present
National Nature Science Fund Project, China
Deputy Leader
- Used near-infrared spectrometer and chemical analysis to collect nearly 10,000 spectral data.
- Used Deep Learning to optimize traditional near-infrared spectroscopy detection and set up innovative food quality inspection system for improving quality and safety of the catering industry.
- Acquired a software copyright as first author.

Research on Canzhi Food Materials Image Recognition   01/2017-02/2018
Project Leader
- The group manually cleaned 30,000 pieces of food materials images and created a data set containing 51 types of food materials, unopened bags, and dirty pictures.
- Used multi-task learning, business information such as the type and weight of food materials in the order to improve the CNN model, the recognition accuracy of 51 types of food materials was as high as 99%.
- Settled down the research framework, scheduled for the team.

Forest Fire Prediction and Introduction of Fire Fighting Resource Scheduling Technology
948 project of the State Forestry Administration, China   01/2015-06/2016
Assistant Researcher
- Used 3D spherical cell space to improve the 2D cell space, and improved the cellular automaton algorithm by multi-objective genetic algorithm, so as to improve the prediction accuracy of the forest fire spread model.
- Delivered an academic exchange report with the research team of the System Modeling and Simulation Laboratory of the Georgia State University in the United States.

PROFESSIONAL EXPERIENCES

Hunan Luyan Information Technology Co., Ltd   03/2018-present

Founder

- Responsible for pre-project market research, market needs research, and determined product function and technical reports;
- As a leader, called for and set up an entrepreneurial team consisting of more than 10 doctoral students, master students and undergraduates;
- Developed the first prototype to detect the freshness and water content of apples and to distinguish the fresh meat from the frozen;
- Reached a cooperation agreement with a number of national chain restaurants such as "Shi Zai Bu Yi Yang" and "Yun Shui Yao".

Hunan Luchuan Information Technology Co., Ltd   09/2016-12/2016

Software Engineering Intern

- Participated in the MVC Pro software devil training camp and learned software engineering related knowledge;
- Engaged in the Internet Financial Judicial Litigation Platform Project, which is an Internet platform built to facilitate financial platforms to solve non-performing loans through legal channels while reducing the time for lawyers to handle such cases;
- Used XMind to analyze and integrate user requirements, legally learned and used prototypes of related websites, used Visio to design functional architecture diagrams, used Axure to prototype 28 web pages, and used IntelliJ IDEA to develop web pages.
- The project successfully acquired one law firm, signed a number of lawyers, and cooperated with many banks such as Minsheng Bank.

SELECTED HONORS & AWARDS

- Second Prize for "Internet +" University Students Innovation and Entrepreneurship Contest *(Top 5%)*, HNU   06/2018
- Second Prize for 3rd Hunan "Internet +" University Student Innovation and Entrepreneurship Contest (*Top 1%*), Provincial level   07/2017
- Third Prize for the 12th Challenge-cup Extracurricular and Academic Contest (*Top 5%*), Provincial level   06/2017
- Excellent Graduate Student of Hunan Province (*Top 3%*), Provincial level   05/2017
- National Scholarship (*highest national award for Top 1%*), Nationwide   11/2016
- National Encouragement scholarship (*Top 3%*), Nationwide   12/2015

EXTRACURRICULAR ACTIVITIES

- *Teaching Assistant* for *Web Design*, HNU   07/2018-09/2018
- *Teaching Assistant* for *Computer Algorithm*, HNU   03/2018-07/2018
- *Teaching Assistant* for *MySQL Database*, HNU   09/2017-01/2018
- *Secretary* of the Youth League Branch Committee of the Automation Engineering 09/2015-06/2017
- *Volunteer* of Red Cross Society of China, Changsha   10/2014-10/2015