Dr. Huiting Xu

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- Permanent Resident of US

TEACHING and RESEARCH SUMMARY

My teaching approach engages students' natural creativity with a challenging mix of theory and practice. After theoretical lectures, I design engaging, hands-on lab sessions to reinforce key concepts. I prioritize full-semester, large-scale projects over smaller, disconnected labs, encouraging students to revisit and integrate previously learned material as they work toward completing comprehensive projects. For over two years, I have successfully taught introductory courses in computer science at Syracuse University, leveraging this approach to create a dynamic, impactful and engaging learning environment.

My current research focuses on solving anomaly detection problems in sensor data using machine learning models and exploring renewable energy distribution for colocation data centers. I develop algorithmic, optimization, and game theory-based methods to reduce energy cost and enhance network resource utilization across systems of varying scales from embedded systems and wireless sensor networks to data centers.

EDUCATION

➤ **Ph.D** in Computer Science   Sep.2011 – Aug.2019
   Northeastern University, China
➤ **MS** in Computer Science   Sep. 2008 – Jul. 2010
   Northeastern University, China
➤ **BS** in Computer Science   Sep. 2002 – Jul. 2006
   Northeastern University, China

PROFESSIONAL EXPERIENCE

➤ Department of Computer Science at Ball State University
   Assistant Teaching Professor   Aug.2025- present
   - CS120S7/S8: Computer Science 1: Programming Fundamentals (Fall 2025)
   - CS201: Introduction to Database Programming (Fall 2025)
   - CS617: Introduction to Programming (Fall 2025)
➤ Department of Electrical Engineering and Computer Science at Syracuse University
   - Part time Instructor   Aug.2022– May.2025
     - CPS181: Introduction to Computing (Fall 2022, Spring 2023, Fall 2023, Spring 2024)
       Teaching Evaluation (4.36/5.00, 4.30/5.00, 4.47/5.00, 4.29/5.00)
     - CPS196: Introduction to Computer Programming (Fall2024, no evaluation yet)
     ✓ Created comprehensive curriculum and lesson plans aligned with program requirements and industry standards.

- ✓ Developed hands-on lab exercises to reinforce practical skills and complement lecture content.
- ✓ Implemented various teaching strategies to engage and inspire students.
- ✓ Leveraged diverse instructional methods such as slides, videos, demonstrations, and quizzes to convey knowledge.
- ✓ Provided dedicated office hours to address individual student inquiries and support their learning needs.

➢ Sensor Fusion Group of Syracuse University
- • Visiting Researcher   Jan.2022 – Aug.2022
  Used machine learning/deep learning techniques for anomaly detection in sensor data.

➢ Real Time Embedded System Lab at Northeastern University, China
- • Research Assistant   Sep. 2011– Aug. 2019
  Main research focuses on energy-efficient computing for Cyber Physical Systems spreading from low-level embedded systems and wireless sensor networks to high-level data centers.

➢ Sequoia, Canada
- • Data Engineer   Apr. 2013 – Jan. 2014
  Assisted the accountant to launch a new platform for managing customer data.
  Analyzed the data for the company to make future budget plans.

➢ Neusoft Cooperation, China
- • Software Engineer   Sep. 2010 – Oct. 2012
  Designed, developed, and maintained the PC-end user interface, data processing and communication modules for a product of Automatic Biochemical Analyzer.

➢ Natural Language Processing Lab at Northeastern University, China
- • Research Assistant   Sep. 2008 – Jul. 2010
  Designed and developed a machine learning based multi-documents summarization system based on information extraction and semantic similarity.

➢ Neusoft Cooperation, China
- • Junior Software Engineer   Jul. 2006 – Jul. 2008
  Developed and maintained the PC-end user interface and data processing modules for a product of Automatic Biochemical Analyzer**.**

➢ Shenyang ZHIXIANG Technology co. Ltd, China
- • Internship/Software Engineer   Jul. 2004 – Sep. 2005
  Developed function modules and web pages of a product of Dandong Mah-jong game.

PUBLICATION

➢ **Huiting Xu**, Xi Jin, Fanxin Kong, and Qingxu Deng. "Two Level Colocation Demand Response with Renewable Energy", in IEEE Transactions on Transactions on Sustainable Computing, 2020.

➢ Xi Jin, **Huiting Xu**, Changqing Xia, Jintao Wang, and Peng Zeng. "Converge cast scheduling and cost optimization for industrial wireless sensor networks with multiple radio interfaces", in Wireless Networks, 2018.

➢ **Huiting Xu**, Xi Jin, and Qingxu Deng. "Hierarchical demand response for colocation data centers", in IEEE International Conference on Smart Computing, 2017.

- **Huiting Xu**, Xi Jin, Fanxin Kong, and Qingxu Deng. "Maximizing the lifetime of wireless sensor networks in trains for monitoring long-distance goods transportation", in International Journal of Distributed Sensor Networks, 2017.
- Xi Jin, Changqing Xia, **Huiting Xu**, Jintao Wang, and Peng Zeng. "Mixed criticality scheduling for industrial wireless sensor networks", in Sensors, 2016.
- Xi Jin, Fanxin Kong, Peng Zeng, Qingxu Deng, and **Huiting Xu**. "Joint management of energy harvesting, storage, and usage for green wireless sensor networks", in International Journal of Distributed Sensor Networks, 2014.
- **Huiting Xu**, Fanxin Kong, and Qingxu Deng. "Energy minimizing for parallel real-time tasks based on level-packing", in IEEE International Conference on Embedded and Real-Time Computing Systems and Applications, 2012.

CERTIFICATES

- Python for Data Science and Machine Learning Bootcamp
  Certificate earned at Coursera   Jun.2022
- Neural Networks and Deep Learning
  Certificate earned at Coursera (Grade: 99.01%)   Dec. 2021
- Introduction to Data Science in Python by University of Michigan
  Certificate earned at Coursera   Dec. 2017
- Machine Learning by Stanford University on Coursera
  Certificate earned at Coursera   Oct. 2017

AWARDS

- Excellent Graduate Student
  Northeastern University, China   2010
- First-class University Scholarship (2nd place in the admission exam)
  Northeastern University, China   2008
- Excellent New Employee
  IA Business Department, Neusoft Cooperation, China   2007
- People Scholarship
  Northeastern University, China   2005

TEACHING INTEREST

- General Computer Science (GCS)
  - Database Design
  - Programming Languages
  - Theory of Computation 1
  - Introduction to Computing
  - Rigorous Software Specification, Design and Testing
  - Introduction to Object-Oriented Design
  - Algorithms
- Data Analytics and Machine Learning Concentration

- Data Visualization
- Data Analytics
- Data Mining and Machine Learning