Xinyue Zhang

Tel: +86 19117208896 E-Mail: xyzhang@stu.ecnu.edu.cn

Add: 3663 Zhongshan North Road, Putuo District, Shanghai, 200333, China

EDUCATION

2021.09-2025.06 East China Normal University (Shanghai, China)
Ph.D. student of AI for Education (a sub-discipline of Computer Science and Technology)

2018.09-2021.06 Hainan University (Haikou, China)
Master of Software Engineering, GPA: 3.72/4

2015.07-2015.08 Nanyang Technological University (Singapore)
Overseas Programme in Entrepreneurship and Innovation, Best Business Model Awards

2014.09-2018.06 Hainan University (Haikou, China)
Bachelor of Computer Science and Technology, GPA: 3.35/4

PUBLICATIONS

- **Xinyue Zhang**, Haiyan Zhao, Kun Wang, Fangqing Zhu, Guitao Cao* and Yaofeng Xue, " Bring the Painting of Education Robots to Life with Vivid Intelligence," *IEEE Transactions on Learning Technologies*; 2022, under review.
- **Xinyue Zhang**, Ting Jin*, Mingjie Han, Jingsheng Lei, "Local Interaction and Global Guidance Based Low and High-level Feature Fusion for RGB-D Fixation Prediction," *IEEE 23rd Int Conf on High Performance Computing & Communications*; 2021, pp. 2379-2385.
- **Xinyue Zhang**, Ting Jin*, Wujie Zhou and Jingsheng Lei, "Attention-based Contextual Interaction Asymmetric Network for RGB-D Saliency Prediction", *Journal of Visual Communication of Image Representation*, vol. 74, 2021, pp.1047-3203. (IF=2.479)
- **Xinyue Zhang**, Ting Jin*, Mingjie Han, Jingsheng Lei and Zhichao Cao, "Visual Saliency Prediction Using Attention-based Cross-modal Integration Network in RGB-D Images", *Intelligent Automation & Soft Computing*, 2020. (IF = 1.3)
- **Xinyue Zhang** and Ting Jin*. "Attention-based Asymmetric Fusion Network for Saliency Prediction in 3D Images", *Lecture Notes in Computer Science*, Springer, vol 12401, 2020, pp. 93-105.
- Yucong Duan*, **Xinyue Zhang**, Changbing Zhou, Mengxing Huang, Chunjie cao and Xiaoyi Zhou, "Security Provision for Implicit Typed Resources", *Journal of Frontiers of Computer Science and Technology*, vol.12, 2019, pp.2061-2072.
- Chinese Patents: CN111768375A, and one pending patent. Mainly contains two topics: models for RGB-D saliency prediction, and the strategy for teachers to prepare lessons intelligently.

RESEARCH EXPERIENCE

- **2021.09-2023.04 East China Normal University (Shanghai, China)**
  Exploit the knowledge map technology, affective computing theory, and natural language processing technology to build an intelligent educational robot.
  - On the basis of 1,393 publications from 2016 to 2022, selected 134 studies with a search and selection strategy, summarizing a comprehensive review of intelligent educational robots, discussing the new challenges of current research and the outlook on the development trends of intelligent educational robots in the future.
  - Based on the knowledge graph technology, constructed the knowledge graph of related subjects in primary and secondary schools. Built the intelligent educational robot using advanced gesture recognition, speech recognition, affective computing technologies, and natural language processing technology.
- **2021.09-2025.06 East China Normal University (Shanghai, China)**
  Built a comprehensive educational assistant system, reducing the burden on teachers and promoting the development of students' learning abilities.
  - Composed of the teacher terminal and the student terminal, the educational assistant system helps teachers prepare lessons intelligently, create homework with one click, and grade assignments intelligently. The

system can also help students improve their abilities and personalities, help students learn well, and promote resource sharing and education fairness.

- **2019.12-2021.06 Hainan University (Haikou, China)**
  Zhejiang University of Science & Technology (Hangzhou, China)
  Explored RGB-D saliency prediction algorithms based on studies of the multi-level and cross-modal feature fusion as well as attention mechanisms.
  - Designed two algorithms for human eye-fixation prediction. Tools like Python, Pytorch, and Matlab.
  - Compared the proposed models to other state-of-the-art approaches on the NUS dataset and NCTU dataset, the results indicated that the proposed models consistently outperformed.
- **2019.07-2020.09 Zhejiang University of Science & Technology (Hangzhou, China)**
  The research aims at solving the problem of tracking multiple people in occlusion situations of smart substations and real-timely locating them on the base maps.
  - Collected surveillance videos in a smart substation and established a dataset containing 10073 images. Tools like Python, Tensorflow framework, labelImg.
  - The research designed an integrated metric learning-based multiple objects tracking method. The method is effective and efficient in not only less but also heavy occlusion scenes.
- **2018.11-2021.06 Hainan University (Haikou, China)**
  Leveraged computer vision technology to detect several abnormal behaviors on campus.
  - Collected videos of abnormal behaviors on campus.
  - Extracted feature points based on human pose estimation and established an abnormal behavior identification network. Also, introduced a channel attention mechanism to improve the identification ability. Then simulated the corresponding abnormal situations to test the efficiency.
- **2018.04-2018.11 Hainan University (Haikou, China)**
  Explored a value-driven security solution based on the DIKW (data, information, knowledge, wisdom) method to classify the target of protection content and background content into three types of resources: data, information, and knowledge.
  - Divided target security resources into explicit and implicit resources according to their existing forms in the search space, and corresponding security protection schemes are constructed according to the conversion and search cost differences corresponding to different types of resource expressions.
  - Simulation results show that the architecture supports the design and provision of value-driven security solutions based on the differences in the conversion cost of different types of resources and the search cost after conversion.

ACTIVITIES

- **2020.07-2020.08 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval, SIGIR 2020**
  - Student volunteer.
- **2019.07-2020.11 The Nineteenth China National Conference on Computational Linguistics, CCL 2020**
  - Website developer and student volunteer.

HONORS AND AWARDS

- **2022.09** Second Prize, The China Graduate Electronics Design Contest
- **2019.09** First class scholarship, Hainan University
- **2018.10** Third Prize, China "AI+" Innovation and Entrepreneurship Competition
- **2018.09** First class scholarship, Hainan University
- **2017.10** First class scholarship, Hainan University
- **2016.05** Third Prize, China Internet "+" College Students Innovation and Entrepreneurship Competition
- **2015.10** Second class scholarship, Hainan University
- **2015.07** Best Business Model, Overseas Programme in Entrepreneurship and Innovation of NTU

SKILLS

- Computer skills: Python, Pytorch, HTML, CSS, Photoshop, Illustrator, Visio, Microsoft Office
- Hobbies: Violin, Piano, Guitar, Music