Prof. Szu-Hao Huang

Szu-Hao Huang received his B.E. and Ph.D. degrees in Computer Science from National Tsing Hua University, Hsinchu, Taiwan, in 2001 and 2009, respectively. He is currently a professor in the Department of Information Management and Finance at National Yang Ming Chiao Tung University, Hsinchu, Taiwan. His research interests include machine learning, recommender systems, information security, computer vision, and financial technology. He has authored more than 100 papers in international journals and conferences, including TMI, TSC, TKDD, and TIST. Prof. Huang also serves as the Chief Director of the NYCU Financial Technology (FinTech) Innovation Research Center and leads several industry-academia collaboration projects with leading technology and financial companies in Taiwan.

Journal Publications

1. Su, J. W., Chen, C. T., Toh, D. R., & Huang, S. H.* (2025/2). Evolving intra-and inter-session graph fusion for next item recommendation. Information Fusion, 114, 102691. (SCI)
2. Lin, S. J., Chen, C. T., & Huang, S. H.* (2024/6). Member-Augmented Group Recommendation With Multi-Interest Framework and Knowledge Graph Embeddings. IEEE Transactions on Computational Social Systems, 11(3), 3193-3206. (SCI)
3. Hsu, C. W., Chen, C. T., & Huang, S. H.* (2024/4). Adaptive adversarial contrastive learning for cross-domain recommendation. ACM Transactions on Knowledge Discovery from Data, 18(3), 1-34. (SCI)
4. Chen, C. T., Lee, C., Huang, S. H.*, & Peng, W. C. (2024/4). Credit Card Fraud Detection via Intelligent Sampling and Self-supervised Learning. ACM Transactions on Intelligent Systems and Technology, 15(2), 1-29. (SCI)
5. Liu, J. C., Chen, C. T., Lee, C., & Huang, S. H.* (2024/4). Evolving Knowledge Graph Representation Learning with Multiple Attention Strategies for Citation Recommendation System. ACM Transactions on Intelligent Systems and Technology, 15(2), 1-26. (SCI)
6. Wu, M. C., Huang, S. H.*, & Chen, A. P. (2024/3). Momentum portfolio selection based on learning-to-rank algorithms with heterogeneous knowledge graphs. Applied Intelligence, 54(5), 4189-4209. (SCI)
7. Yang, Y. C., Chen, C. T., Lu, T. Y., & Huang, S. H.* (2023/10). Hierarchical Reinforcement Learning for Conversational Recommendation With Knowledge Graph Reasoning and Heterogeneous Questions. IEEE Transactions on Services Computing, 16(5), 3439-3452. (SCI)
8. Chen, M. Y., Chen, C. T., & Huang, S. H.* (2023/8). Knowledge distillation for portfolio management using multi-agent reinforcement learning. Advanced Engineering Informatics, 57, 102096. (SCI)
9. Chan, C. T., Huang, S. H.*, & Choy, P. P. (2023/8). Poisoning attacks on face authentication systems by using the generative deformation model. Multimedia Tools and Applications, 82(19), 29457-29476. (SCI)
10. Yang, W. T., Chen, C. T., Sang, C. Y., & Huang, S. H.* (2023/6). Reinforced pu-learning with hybrid negative sampling strategies for recommendation. ACM Transactions on Intelligent Systems and Technology, 14(3), 1-25. (SCI)

11. Huang, W. C., Chen, C. T., Lee, C., Kuo, F. H., & Huang, S. H.* (2023/3). Attentive gated graph sequence neural network-based time-series information fusion for financial trading. Information Fusion, 91, 261-276. (SCI)
12. Chung, C. Y., & Huang, S. H.* (2023/3). Interactively transforming Chinese ink paintings into realistic images using a border enhance generative adversarial network. Multimedia Tools and Applications, 82(8), 11663-11696. (SCI)
13. He, F. F., Chen, C. T., & Huang, S. H.* (2023/2). A multi-agent virtual market model for generalization in reinforcement learning based trading strategies. Applied Soft Computing, 134, 109985. (SCI)
14. Wang, T. Y., Chen, C. T., Huang, J. C., & Huang, S. H.* (2023/1). Modeling cross-session information with multi-interest graph neural networks for the next-item recommendation. ACM Transactions on Knowledge Discovery from Data, 17(1), 1-28. (SCI)
15. Hung, T. Y., & Huang, S. H.* (2022). Addressing the cold-start problem of recommendation systems for financial products by using few-shot deep learning. Applied Intelligence, 52(13), 15529-15546. (SCI)
16. Hsu, P. Y., Chen, C. T., Chou, C., & Huang, S. H.* (2022). Explainable mutual fund recommendation system developed based on knowledge graph embeddings. Applied Intelligence, 52(9), 10779-10804. (SCI)
17. Chen, H. Y., & Huang, S. H.* (2022). Generating a trading strategy in the financial market from sensitive expert data based on the privacy-preserving generative adversarial imitation network. Neurocomputing, 500, 616-631. (SCI)
18. Lin, Y. C., Chen, C. T., Sang, C. Y., & Huang, S. H.* (2022). Multiagent-based deep reinforcement learning for risk-shifting portfolio management. Applied Soft Computing, 123, 108894. (SCI)
19. Chou, Y. C., Chen, C. T., & Huang, S. H.* (2022). Modeling behavior sequence for personalized fund recommendation with graphical deep collaborative filtering. Expert Systems with Applications, 192, 116311. (SCI)
20. Wu, Z. W., Chen, C. T., & Huang, S. H.* (2022). Poisoning attacks against knowledge graph-based recommendation systems using deep reinforcement learning. Neural Computing and Applications, 34(4), 3097-3115. (SCI)
21. Chen, Y. F., & Huang, S. H. * (2021). Sentiment-influenced trading system based on multimodal deep reinforcement learning. Applied Soft Computing, 112, 107788. (SCI)
22. Huang, S. H.*, Miao, Y. H., & Hsiao, Y. T. (2021). Novel Deep Reinforcement Algorithm With Adaptive Sampling Strategy for Continuous Portfolio Optimization. IEEE Access, 9, 77371-77385. (SCI)
23. Wang, P. Y., Chen, C. T., Su, J. W., Wang, T. Y., & Huang, S. H.* (2021). Deep learning model for house price prediction using heterogeneous data analysis along with joint self-attention mechanism. IEEE Access, Vol. 9, pp.55244-55259. (SCI)
24. Chen, Y. Y., Chen, C. T., Sang, C. Y., Yang, Y. C., & Huang, S. H.* (2021). Adversarial attacks against reinforcement learning-based portfolio management strategy. IEEE Access, Vol. 9, pp.50667-50685 (SCI)
25. Kuo, C. H., Chen, C. T., Lin, S. J., & Huang, S. H.* (2021). Improving Generalization in Reinforcement Learning-Based Trading by Using a Generative Adversarial Market Model. IEEE Access, Vol. 9, pp.50738-50754. (SCI)
26. Cheong, M. S., Wu, M. C., & Huang, S. H.* (2021). Interpretable Stock Anomaly Detection Based on Spatio-Temporal Relation Networks With Genetic Algorithm. IEEE Access, Vol. 9, pp. 68302-68319. (SCI)
27. Yeh, L. Y.*, Lu, P. J., Huang, S. H., & Huang, J. L. (2020). SOChain: A Privacy-Preserving DDoS Data Exchange Service Over SOC Consortium Blockchain. IEEE Transactions on Engineering Management, Vol. 67, No. 4, pp.1487-1500. (SCI)

28. Chu, C.H.*, Huang, S.H., Yang, C.K., and Tseng, C.Y. (2015) “Design customization of respiratory mask based on 3D face anthropometric data” International Journal of Precision Engineering and Manufacturing, Vol. 16, No. 3, pp.487-494. (SCI)
29. Huang, S.H.* and Pan, Y.C. (2015) “Automated Visual Inspection in Semiconductor Industry: A Survey,” Computers in Industry, Vol. 66, pp.1-10. (SCI)
30. Lo, C.H., Chu, C.H.*, and Huang, S.H. (2015) “Evaluating the Effect of Interactions between Appearance-Related Product Designs and Facial Characteristics on Social Affectivity,” International Journal of Industrial Ergonomics, Vol. 45, pp.35-47. (SCI)
31. Huang, S.H.* and Lai, S.H. (2014) “A Joint Learning Approach to Face Detection in Wavelet Compressed Domain,” Mathematical Problems in Engineering, Vol. 2014, pp.1-13. (SCI)
32. Huang, S.H.* and Pan, Y.C. (2014) “Ergonomic job Rotation Strategy Based on An Automated RGB-D Anthropometric Measuring System.” Journal of Manufacturing Systems, Vol. 33, No. 4, pp.699-710. (SCI)
33. Huang, S.H., Yang, Y.I., and Chu, C.H.* (2012) “Human-Centric Design Personalization of 3D Glasses Frame in Markerless Augmented Reality,”Advanced Engineering Informatics, Vol. 26, No. 1, pp.35-45. (SCI)
34. Huang, S.H., Tai, S.H., Lai, S.H.* (2011) “A Learning based Contrarian Trading Strategy via Dual Classifiers Model,” ACM Transactions on Intelligent Systems and Technology, Vol. 2, No. 3. (SCI)
35. Huang, S.H., Chu, Y.H., Lai, S.H.*, Novak, C.L. (2009)“Learning-based Vertebra Detection and Iterative Normalized-Cut Segmentation for Spinal MRI,”IEEE Transactions on Medical Imaging, vol. 28, no. 10, pp. 1595-1605. (SCI)
36. Huang, S.H., Wu, Q.J., and Lai, S.H.* (2006) “Improved AdaBoost-based image retrieval with relevance feedback via paired feature learning,“Multimedia Systems, vol. 12, pp. 14-26. (SCI)