Assistant Professor Subrota Kumar Mondal

School of Computer Science and Engineering, Faculty of Innovation Engineering
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Academic Qualification:

Ph.D. in Computer Science and Engineering, Hong Kong University of Science and Technology

B.Sc. in Computer Science and Engineering, Khulna University of Engineering and Technology

Teaching Area

Operating Systems, Deep Learning, Software Engineering, Software Project Management

Research Area

Cloud/Serverless Computing, Cybersecurity, Deep Learning, NLP, Smart City

Working Experience

Sep 2018 - Present, Assistant Professor, Macau University of Science and Technology, Macao, China

Sep 2017 - Aug 2018, Postdoctoral Fellow, The Hong Kong Polytechnic University, Hong Kong, China

Dec 2016 - Aug 2017, Software Developer, iSunCloud Limited, Hong Kong, China

Sep 2015 - Nov 2016, Instructional Assistant, HKUST, Hong Kong, China

Sep 2011 - Aug 2015, Research Assistant and Teaching Assistant, HKUST, Hong Kong, China

Jun 2013 - Aug 2013, Summer Intern, Infosys Lab, India

Apr 2009 - Aug 2011, Lecturer, Pabna University of Science and Technology (PUST), Bangladesh

Jan 2008 - Mar 2009, Services Engineer, LM Ericsson Bangladesh Limited, Bangladesh

Academic Publication（selected）

Kabir, H. D., **Mondal, S. K.**, Khanam, S., Khosravi, A., Rahman, S., Qazani, M. R. C., ... & Acharya, U. R. (2023). Uncertainty aware neural network from similarity and sensitivity. Applied Soft Computing, 149, 111027.

Mondal, S. K., Zhang, H., Kabir, H. D., Ni, K., & Dai, H. N. (2023). Machine translation and its evaluation: a study. Artificial Intelligence Review, 56(9), 10137–10226..

Mondal, S. K., Wu, X., Kabir, H. M. D., Dai, H. N., Ni, K., Yuan, H., & Wang, T. (2023). Toward Optimal Load Prediction and Customizable Autoscaling Scheme for Kubernetes. Mathematics, 11(12), 2675.

Guan, M., **Mondal, S. K.**, Dai, H. N., & Bao, H. (2023). Reinforcement learning-driven deep question generation with rich semantics. Information Processing & Management, 60(2), 103232.

Mondal, S.K.; Tan, T.; Khanam, S.; Kumar, K.; Kabir, H.M.D.; Ni, K. Security Quantification of Container-Technology-Driven E-Government Systems. Electronics 2023, 12, 1238.

Kabir, H. D., Abdar, M., Khosravi, A., Nahavandi, D., **Mondal, S. K.**, Khanam, S., ... & Suganthan, P. N. (2023). Synthetic Datasets for Numeric Uncertainty Quantification: Proposing Datasets for Future Researchers. IEEE Systems, Man, and Cybernetics Magazine, 9(2), 39-48.

Song, Y., Wang, T., Cai, P., **Mondal, S. K.**, & Sahoo, J. P. (2023). A comprehensive survey of few-shot learning: Evolution, applications, challenges, and opportunities. ACM Computing Surveys, 55(13s), 1-40.

He, J., Zhao, W., Li, Z., Huang, J., Li, P., Zhu, L., ... & **Mondal, S. K.** (2023, August). Reference-Based Line Drawing Colorization Through Diffusion Model. In Computer Graphics International Conference (pp. 362-372). Cham: Springer Nature Switzerland.

Mondal, S. K., Pan, R., Kabir, H. M., Tian, T., & Dai, H. N. (2022). Kubernetes in IT administration and serverless computing: An empirical study and research challenges. The Journal of Supercomputing, 78(2), 2937-2987.

Kabir, H.D., Khanam, S., Khozeimeh, F., Khosravi, A., **Mondal, S.K.**, Nahavandi, S. and Acharya, U.R., 2022. Aleatory-aware deep uncertainty quantification for transfer learning. Computers in Biology and Medicine, p.105246.

Chen, Z., Wang, T., Cai, H., **Mondal, S. K.**, & Sahoo, J. P., BLB-gcForest: A High-Performance Distributed Deep Forest with Adaptive sub-Forest Splitting, IEEE Transactions on Parallel & Distributed Systems, (01), 1-1, (2021).

Kabir, H. D., Khosravi, A., **Mondal, S. K.**, Rahman, M., Nahavandi, S., & Buyya, R. (2021). Uncertainty-aware Decisions in Cloud Computing: Foundations and Future Directions. ACM Computing Surveys (CSUR), 54(4), 1-30.

Zhang, Z., Dai, H. N., Zhou, J., **Mondal, S. K.**, García, M. M., & Wang, H. (2021). Forecasting Cryptocurrency Price Using Convolutional Neural Networks with Weighted and Attentive Memory Channels. Expert Systems with Applications, 115378.

Kumar, K., Khanam, S., Bhuiyan, M. M. I., Qazani, M. R. C., **Mondal, S. K.**, Asadi, H., ... & Nahavandi, S. (2021, December). Spinalxnet: Transfer learning with modified fully connected layer for x-ray image classification. In 2021 IEEE International Conference on Recent Advances in Systems Science and Engineering (RASSE) (pp. 1-7). IEEE.

Mondal, S.K.; Xiaoyan Yin; Muppala, J.K.; Alonso Lopez, J.; Trivedi, K.S., "*Defects per Million Computation in Service-Oriented Environments*," IEEE Transactions on Services Computing, vol.8, no.1, pp.32-46, Jan.-Feb. 2015.

Mondal, S.K.; Muppala, J. K.; Machida, F., "*Virtual Machine Replication on Achieving Energy-Efficiency in a Cloud*," Electronics, 5(3), 37, 2016.

King-Hang Wang, **Mondal, S.K.**, Ki Chan, and Xiaoheng Xie, "*A Review of Contemporary E-voting: Requirements, Technology, Systems and Usability,*" Data Science and Pattern Recognition, vol. 1(1), pp. 31-47, 2017.

Mondal, S.K.; Machida, F.; Muppala, J.K., "*Service Reliability Enhancement in Cloud by Checkpointing and Replication*," In Principles of Performance and Reliability Modeling and Evaluation, pp.425-448. Springer International Publishing, 2016.

Khanam, S., Qazani, M. R. C., **Mondal, S. K.**, Kabir, H. D., Sabyasachi, A. S., Asadi, H., ... & Nahavandi, S. (2022, October). CoV-TI-Net: transferred initialization with modified end layer for COVID-19 diagnosis. In *2022 IEEE International Conference on Systems, Man, and Cybernetics (SMC)* (pp. 2237-2243). IEEE.

Mondal, S. K., Pei, Y., Dai, H. N., Kabir, H. D., & Sahoo, J. P. (2020, December). "*Boosting UI Rendering in Android Applications*". In 2020 IEEE 20th International Conference on Software Quality, Reliability and Security Companion (QRS-C) (pp. 285-286). IEEE.

Chang, N., Wang, L., Pei, Y., **Mondal, S. K.**, & Li, X. (2018, July). Change-Based Test Script Maintenance for Android Apps. In *2018 IEEE International Conference on Software Quality, Reliability and Security (QRS)* (pp. 215-225). IEEE.

Mondal, S.K.; Muppala, J.K.; Trivedi, K.S., "*Defects Per Million (DPM): A user-oriented perspective of telecommunication systems*," Globecom Workshops (GC Wkshps), 2014 , vol., no., pp.711-716, 8-12 Dec. 2014

Professional Certification and Awards

Certified Kubernetes Administrator (CKA), Cloud Native Computing Foundation (CNCF), The Linux Foundation, 2020

Certified Kubernetes Application Developer (CKAD), Cloud Native Computing Foundation (CNCF), The Linux Foundation, 2020

Professional Society Membership

Member, Institute of Electrical and Electronics Engineers (IEEE)