Huibin Shen

icdishb@gmail.com • +49 151-4382-0549 • Google Scholar • GitHub

EDUCATION

Aalto University, Espoo, Finland; Supervisor: Prof. Juho Rousu — Jan 2013 – Jun 2017

- Doctor of Philosophy (**Pass with Distinction**) in Computer Science
  - Thesis: Machine learning methods for small molecule identification
  - Award: Best Finnish bioinformatics Ph.D. thesis done in 2016-2017

University of Helsinki, Helsinki, Finland — Sep 2010 – Aug 2012

- Master of Science (M.S.) in Algorithms and Machine Learning

East China Normal University, Shanghai, China — Sep 2006 – Jul 2010

- Bachelor of Science (B.S.) in Software Engineering

WORK EXPERIENCE

Machine Learning Scientist, Amazon Web Service — Jul 2017 – Present

- Launching team of AWS SageMaker Automatic Model Tuning (HPO)
- Launching team of AWS SageMaker AutoPilot (AutoML)
- Applied research in HPO and AutoML, leading to both production and external impacts
- 3 external publications, 3 major production features, 2 filed US patents and 4 (internal) technical reports

Applied Scientist Intern, Amazon Core Machine Learning — Jun 2016 – Sep 2016

- Project: Bayesian Optimization with conditional dependency

PROFESSIONAL ACTIVITIES

- PC member of NAS workshop at ICLR 2020
- Reviewer of NeurIPS (2020, 2019, 2018), ICLR (2020, 2019), ICML (2020), TKDD (2016)
- Organizer of HPO and AutoML reading group at Amazon Berlin
- Dagstuhl Seminar on Computational Metabolomics 2015, Dagstuhl, Germany

SELECTED PUBLICATIONS

[1] D. Salinas, H. Shen, and V. Perrone, "A quantile-based approach for hyperparameter transfer learning." *Proceedings of the International Conference on Machine Learning (ICML 2020)*, Jul 2020.

[2] V. Perrone, H. Shen, M.W. Seeger, C. Archambeau and R. Jenatton, "Learning search spaces for Bayesian optimization: Another view of hyperparameter transfer learning." *Advances in Neural Information Processing Systems 32 (NeurIPS 2019)*, Dec 2019.

[3] C. Brouard, H. Shen, K. Dührkop, F. d'Alché-Buc, S. Böcker and J. Rousu, "Fast metabolite identification with Input Output Kernel Regression." *Proceedings of Intelligent Systems for Molecular Biology 2016*, Orlando, USA, Jul 2016.

[4] H. Shen, S. Szedmak, C. Brouard and J. Rousu, "Soft Kernel Target Alignment for Two-stage Multiple Kernel Learning." *Proceedings of 19th International Conference on Discovery Science*, Bari, Italy, Oct 2016.

[5] K. Dührkop, H. Shen, M. Meusel, J. Rousu and S. Böcker, "Searching molecular structure databases with tandem mass spectra using CSI:FingerID" *Proceedings of National Academy of Science*, vol. 112, no. 41, pp. 12580–12585, May 2015.

[6] H. Shen, K. Dührkop, S. Böcker and J. Rousu, "Metabolite identification through multiple kernel learning on fragmentation trees." *Proceedings of Intelligent Systems for Molecular Biology 2014*, Boston, USA, Jul 2014.

[7] H. Shen, N. Zamboni, M. Heinonen and J. Rousu, "Metabolite Identification through Machine Learning–Tackling CASMI Challenge Using FingerID." *Metabolites*, vol. 3, no. 2, pp. 484–505, Jun 2013.

[8] M. Heinonen, H. Shen, N. Zamboni and J. Rousu, "Metabolite identification and molecular fingerprint prediction through machine learning." *Proceedings of Machine Learning in System Biology 2012*, Basel, Switzerland, Aug 2012.

LANGUAGES

Chinese: Native language • English: Professional • German: Basic.