R244: Paper Review Presentation Assignment

2020/10/15 Session 2: Data flow programming

amf85 (Alex) 6.2. D. Murray, F. McSherry, R. Isaacs, M. Isard, et al.: Naiad: A Timely Dataflow System, SOSP, 2013.

lw658 (Luou) 8. M. Abadi et al. Tensorflow: A system for large-scale machine learning. OSDI, 2016.
You can also read: 10. M. Abadi, M. Isard and D. Murray: A Computational Model for TensorFlow - An Introduction, MAPL, 2017.

fb534 (Frank) 3. J. Gjengset, M. Schwarzkopf, J. Behrens, L. T. Araujo, M. Ek, E. Kohler, M. F. Kaashoek and R. Morris: Noria: dynamic, partially-stateful data-flowfor high-performance web applications, OSDI 2018.

rjt80 (Ross) 12. R. Nishihara, P. Moritz, et al.: Ray: A Distributed Framework for Emerging AI Applications, OSDI, 2018.

mog23 (Matthew) 13. M. Schaarschmidt, S. Mika, K. Fricke, E. Yoneki: RLgraph: Flexible Computation Graphs for Deep Reinforcement Learning, SysML, 2019.

2020/10/22 Session 3: Large-scale graph data processing

sjp240 (Sean) 4. J. Gonzalez, Y. Low, H. Gu, D. Bickson, and C. Guestrin: Powergraph: distributed graph-parallel computation on natural graphs. OSDI, 2012.

abs53 (Armins) 5. J. Shun and G. Blelloch: Ligra: A Lightweight Graph Processing Framework for Shared Memory, PPoPP, 2013.

ss2719 (Samuil) 9. A. Roy, I. Mihailovic, W. Zwaenepoel: X-Stream: Edge-Centric Graph Processing using Streaming Partitions, SOSP, 2013.

zz432 (Zhuang) 19. Z. Jia, Y. Kwon, G. Shipman, P. McCormick, M. Erez, A. Aiken: A Distributed Multi-GPU System for Fast Graph Processing, VLDB, 2018.

2020/11/05 Session 5: Many Aspects of Optimisation in Computer Systems

lw658 (Luou) 11. O. Alipourfard et al.: CherryPick: Adaptively Unearthing the Best Cloud Configurations for Big Data Analytics, NSDI, 2017.
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rjt80 (Ross) 31. A. Paliwal et al.: REGAL: Transfer Learning For Fast Optimization of Computation Graphs, arxiv, 2019.
amf85 (Alex) 18. M. Jaderberg, V. Dalibard, S. Osindero, W.M. Czarnecki: Population based training of neural networks, arXiv, 2017.

2020/11/12 Session 6: Probabilistic Programming

mog23 (Matthew) 7. V. Dalibard, M. Schaarschmidt, and E. Yoneki: BOAT: Building Auto-Tuners with Structured Bayesian Optimization, WWW, 2017.
sjp240 (Sean) 9. W. Neiswanger et al.: ProBO: Versatile Bayesian Optimization Using AnyProbabilistic Programming Languag, Arxiv, 2019.

2020/11/19 Session 7: Optimisation of Computer Systems using ML

fb534 (Frank) 1. A. Mirhoseini et al.: **Device Placement Optimization with Reinforcement Learning, ICML, 2017.**
…plus **1.2.** A. Mirhoseini, A. Goldie et al.: A Hierarchical Mode for Device Placement, ICLR, 2018.

ss2719 (Samuil) 6. Z. Jia, O. Padon, J. Thomas, T. Warszawski, M. Zaharia, A. Aiken: TASO: Optimizing Deep Learning Computation with Automated Generation of Graph Substitutions: SOSP, 2019.
zz432 (Zhuang) 39. G. Li, X. Zhou, S. Li, and B. Gao: Qtune: RL for DB query optimisation, VLDB, 2019.

rjt80 (Ross) 38. Kunjir, M. and Babu, S.: Black or White? How to Develop an AutoTuner for Memory-based Analytics, SIGMOD, 2020.