R244: Paper Review Presentation Assignment

2017/10/17 Session 2: Data flow programming: Map/Reduce to TensorFlow

tk532 (Tejas) 5. Derek Murray, Malte Schwarzkopf, Christopher Smowton, Steven Smith, Anil Madhavapeddy and Steven Hand: Ciel: a universal execution engine for distributed data-flow computing, NSDI 2011.

ijdo2 (Indigo) 6.2. D. Murray, F. McSherry, R. Isaacs, M. Isard, et al.: Naiad: A Timely Dataflow System, SOSP, 2013.

acs207 (Aaron) 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

sat62 (Shyam) 2. M. Zaharia, M. Chowdhury, T. Das, A. Dave, J. Ma, M. McCauley, M. Franklin, S. Shenker, I. Stoica: Resilient Distributed Datasets: A Fault-Tolerant Abstraction for In-Memory Cluster Computing, NSDI, 2013.

dt475 (Devin) 12. R. Nishihara, P. Moritz, et al.: Ray: A Distributed Framework for Emerging AI Applications, OSDI, 2018.

2017/10/24 Session 3: Large-scale graph data processing: storage, processing model and parallel processing

vrs26(Vikash) 1. G. Malewicz, M. Austern, A. Bik, J. Dehnert, I. Horn, N. Leiser, and G. Czajkowski: Pregel: A System for Large-Scale Graph Processing, SIGMOD, 2010.
You can read the following paper to add up the specific part of Powergraph model to Pregel presentation. 4. J. Gonzalez, Y. Low, H. Gu, D. Bickson, and C. Guestrin: Powergraph: distributed graph-parallel computation on natural graphs. OSDI, 2012.

dk525(Dmitry) 5. .J. Shun and G. Blelloch: Ligra: A Lightweight Graph Processing Framework for Shared Memory, PPoPP, 2013.

ms2518(Marek) 9. A. Roy, I. Mihailovic, W. Zwaenepoel: X-Stream: Edge-Centric Graph Processing using Streaming Partitions, SOSP, 2013.

cit27 (Michael) 14. S. Hong, H. Chafi, E. Sedlar, K.Olukotun: Green-Marl: A DSL for Easy and Efficient Graph Analysis, ASPLOS, 2012.

sa894(Sami) 18. A. Gharaibeh, E. Santos-Neto, L. Costa, M. Ripeanu: Efficient Large-Scale Graph Processing on Hybrid CPU and GPU Systems, IEEE TPC, 2014.

2017/10/31 Session 4: Stream Data Processing and Data/Query Model

cb2015 (Cristian) 9. A. Floratou et al.: Dhalion: self-regulating stream processing in Heron, VLDB, 2017.

tk532 (Tejas) 11. D. O'Keeffe, T. Salonidis, and P. Pietzuch: Frontier: Resilient Edge Processing for the Internet of Things, VLDB, 2018.

2017/11/14 Session 6: Machine Learning for Optimisation of Computer Systems

sa894(Sami) 7. J. Ansel et al. Petabricks: A language and compiler for algorithmic choice. In Proceedings of the 2009 ACM SIGPLAN Conference on Programming Language Design and Implementation, PLDI, 2009.

ijdo2 (Indigo) 4. V. Dalibard, M. Schaarschmidt, and E. Yoneki: BOAT: Building Auto-Tuners with Structured Bayesian Optimization, WWW, 2017.

cit27 (Michael) 17. T. Kraska, A. Beutel, E. Chi, and J. Dean: The Case for Learned Index Structures, SIGMOD, 2018.

dt475 (Devin) 20. M. Jaderberg, V. Dalibard, S. Osindero, W.M. Czarnecki: Population based training of neural networks, arXiv, 2017.

vrs26(Vikash) 24. E. Liang et al.: RLlib: Abstractions for Distributed Reinforcement Learning, ICML, 2018.

2017/11/21 Session 7: Task scheduling, Performance, and Resource Optimisation

dk525(Dmitry) 5. O. Alipourfard et al.: CherryPick: Adaptively Unearthing the Best Cloud Configurations for Big Data Analytics, NSDI, 2017.

cb2015 (Cristian) 29. Z. Jia, M. Zaharia, and A. Aiken: Beyond Data and Model Parallelism for Deep Neural Networks, ArXiv, 2018.

acs207 (Aaron) 31. T. Chen, T. Moreau, Z. Jiang, L. Zheng, S. Jiao, E. Yan, H. Shen, M. Cowan, L. Wang, Y. Hu, L. Ceze, C. Guestrin, and A. Krishnamurthy:
TVM: An Automated End-to-End Optimizing Compiler for Deep Learning, OSDI, 2018.

sat62 (Shyam) 1. A. Mirhoseini et al.: Device Placement Optimization with Reinforcement Learning, ICML, 2017.

ms2518(Marek) 33. A. Ratner, S. Bach, H. Ehrenberg, J. Fries, S. Wu, and C. Ré: Snorkel: Rapid Training Data Creation with Weak Supervision, VLDB, 2017.