

Yuduo Wu

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EMPLOYMENT

Software Engineer, NovuMind Inc., Deep Learning Infrastructure, Santa Clara, CA 2017 -
- Building distributed platform to accelerate artificial intelligence (AI) and Internet of Things (IoT).

Software Engineer, IBM, Watson & Cloud Platform, Silicon Vally Lab, CA 2015 - 2017
- Prototyped and implemented Cloud Applications/Web Services for IBM Bluemix and SoftLayer.
- Developed health and monitor mechanisms for service accessibility, reliability and data analytics.
- Analyzed and improved the existing APIs and significantly (~30-50%) reduced the process time.

Graduate Student Researcher, University of California, Davis, Davis, CA 2013 - 2015
- Co-authored an open source project (Gunrock) for high-performance graph analytics.
- Implemented Boruvka's parallel minimum spanning tree (MST) algorithm on the GPU.
- Achieved up to $120\times$ speedups against a popular serial C++ implementation (Boost).

Research Internship, DARPA (xDATA Workshop), Arlington, VA Summer 2014, 2015
- Worked closely with multiple research groups and companies for big-data analytics challenge.
- Designed and built pure C and Python interfaces for a GPU (CUDA) graph analytics library.

EDUCATION

University of California, Davis Davis, CA
Master of Science, Electrical and Computer Engineering 2013 - 2015
Advisor: Professor John D. Owens
Research: Parallel Computing (GPU Computing), Graph Analytics
Thesis: "Performance Characterization of High-Level Programming Models for GPU Graph Analytics"

Macau University of Science and Technology Taipa, Macau
Bachelor of Science, Electronic Information Technology 2009 - 2013

TECHNOLOGY SKILLS

Programming: C/C++, Python, Golang, Shell/Bash, CUDA, Java, R, JavaScript
Toolkits: Git, \LaTeX , Unix/Linux, Caffe, TensorFlow, PyTorch, React.js

AWARDS & HONERS

Excellence Achievement Award, NovuMind Inc. 2017
IBM Manager's Choice Award, IBM 2015, 2016
Distinguished Paper Award, Principles and Practice of Parallel Programming (PPoPP'16) 2016
IBM Solutions Excellence Award (EA), IBM 2015
Best Paper Finalist, IEEE International Symposium on Workload Characterization (IISWC'15) 2015
Dean's Honor List Scholarship, Macau University of Science and Technology 2011, 2012, 2013
Crystal Cup Award, Top 3 in GPA, Macau University of Science and Technology 2011, 2012, 2013
Nam Kwong Academic Year Scholarship, Nam Kwong (Group) Co., Ltd, Macau 2012

CERTIFICATIONS

Data Science Foundations , IBM (Acclaim)	Feb 2017
Scala Programming for Data Science , IBM (Acclaim)	Aug 2016
Big Data Spark Foundations , IBM (Acclaim)	Jun 2016
API Management Concepts , IBM (Acclaim)	May 2016
edX Verified Certificate for Scalable Machine Learning , edX	July 2015

PUBLICATIONS

Yuechao Pan, Yangzihao Wang, **Yuduo Wu**, Carl Yang, and John D. Owens. "Multi-GPU Graph Analytics". In *Proceedings of the 31st IEEE International Parallel and Distributed Processing Symposium, IPDPS 2017*, May/June 2017.

Yangzihao Wang, Yuechao Pan, Andrew Davidson, **Yuduo Wu**, Carl Yang, Leyuan Wang, Muhammad Osama, Chenshan Yuan, Weitang Liu, Andy T. Riffel, and John D. Owens. "Gunrock: GPU Graph Analytics". *invited paper to ACM Transactions on Parallel Computing (TOPC), an extended version of PPOPP'16 paper "Gunrock: A High-Performance Graph Processing Library on the GPU"*, January 2017.

Yangzihao Wang, Andrew Davidson, Yuechao Pan, **Yuduo Wu**, Andy Riffel, and John D. Owens. "Gunrock: A High-Performance Graph Processing Library on the GPU". In *Proceedings of the 21st ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming, PPOPP'16*, pages 11:1-11:12. March 2016. **Distinguished Paper**.

Yuduo Wu, Yangzihao Wang, Yuechao Pan, Carl Yang, and John D. Owens. "Performance Characterization of High-Level Programming Models for GPU Graph Analytics". In *IEEE International Symposium on Workload Characterization, IISWC'15*, pages 66-75. October 2015. **Best Paper finalist**.

Yuduo Wu. "Performance Characterization of High-Level Programming Models for GPU Graph Analytics". *ProQuest (Master's thesis at University of California, Davis)*, September 2015.

LEADERSHIP & SERVICE

Vice President of IEEE Student Branch , Macau University of Science and Technology Managed IEEE student members and organized academic activities.	2012 - 2013
Coordinator of Macau Volunteer Group , Macau Volunteered to teach rural elementary students and organized voluntary work.	2011 - 2012