

EDUCATION

- 05/2013-12/2016 **Ph. D. in Computer Engineering**,
University of Louisiana at Lafayette, USA

Dissertation: *High Performance On-Demand
Video Transcoding Using Cloud Services*
- 08/2011-05/2013 **M. S. in Computer Engineering**,
University of Louisiana at Lafayette, USA
GPA: 4.0 / 4.0
- 09/2007-06/2011 **B. S. in Electrical Engineering**,
China Jiliang University, China
GPA: 3.59 / 4.0

EXPERIENCE

- 05/2017-Present **Software Engineer**
Brightcove Inc., Scottsdale, AZ
- Developing on-demand video and audio packager for Brightcove's dynamic video delivery platform.
 - Developing Brightcove Server Side Ad Insertion (SSAI) service to provide seamless commercial insertion for video customers.
- 01/2016-05/2017 **Consultant**
CGI Group Inc., Lafayette, LA
- Developed a web application front-end to create, modify and search different label documents.
 - Implemented an OCR image processing REST service to extract specific contents from pesticide labels.
 - Developed an android app to capture, search and validate pesticide label documents.
- 01/2014-12/2015 **Research Assistant**
The Center for Advanced Computer Studies, University of Louisiana at Lafayette, USA
- **Cloud-Based On-Demand Video Transcoding Using Cloud Services, HPCC Lab**
 - Managed an interdisciplinary team to design and implement a cloud-based video streaming service (CVSS) architecture that can save cloud resource rental cost up to 70% for streaming service providers by transcoding video streams in an on-demand manner.
 - Modeled a *suitability matrix* (SM) to capture the cost performance trade-off of heterogeneous VMs for transcoding tasks. The SM provides resource allocation and scheduling methods with accurate performance and cost trade-offs to increase cloud service utilization efficiency.
 - Developed an open source project on GitHub to generate metadata (e.g. GOP transcoding time, frame number, size, etc.) while transcoding videos using FFmpeg on different Amazon EC2 instances.
- 01/2015-03/2016 **Sponsorship Coordinator**
TEDxVermilionStreet, Lafayette, LA
- Coordinated with a multidisciplinary team to initiate a TED Talk event in Lafayette, Louisiana.
 - Engaged more than 20 local businesses to sponsor the event in the first year.
- 08/2011-12/2013 **Teaching Assistant**
The Center for Advanced Computer Studies, University of Louisiana at Lafayette, USA
- Instructed the EECE140 lab section, taught 60 students using breadboards and Multisim simulation tool.
 - Graded CSCE518 data compression assignments.

EXPERIENCE SNAPSHOT

TECHNICAL SPECIALIZATIONS

- Video Encoding / Transcoding / Packaging
- Cloud Computing
- Web Application Development
- Android Development

SKILLS & BACKGROUNDS

- Proficient in Go, C++, and Java
- Familiar with Python, Ruby, Bash, and JavaScript
- Solid understanding of H.264 and HEVC standards
- Familiar with streaming protocols and DRM
- Strong background in image and signal processing
- Experience with Amazon AWS cloud services
- Fluency on Linux, Windows and Mac OS X

PUBLICATIONS

- 2018 **Xiangbo Li**, Mahmoud K. Dariwich, Mohsen Amini Salehi, Magdy Bayoumi, “*A Survey on Cloud-Based Video Streaming Services*”, Submitted to ACM Computing Surveys, Jan. 2018.
- 2017 **Xiangbo Li**, Mohsen Amini Salehi, Magdy Bayoumi, Nian-Feng Tzeng, Rajkumar Buyya, “*Cost-Efficient and Robust On-Demand Video Transcoding Using Heterogeneous Cloud Services*”, IEEE Transactions on Parallel and Distributed Systems (TPDS), Oct. 2017.
- Xiangbo Li**, Yamini Joshi, Mahmoud K. Dariwich, Brad Landreneau, Mohsen Amini Salehi, Magdy Bayoumi, “*Performance Analysis and Modeling of Video Transcoding Using Heterogeneous Cloud Services*”, Submitted to IEEE Transactions on Cloud Computing (TPDS), Jan. 2017.
- 2016 **Xiangbo Li**, Mohsen Amini Salehi, Magdy Bayoumi, Rajkumar Buyya, “*CVSS: A Cost-Efficient and QoS-Aware Video Streaming Using Cloud Services*”, in Proceedings of 16th ACM/IEEE International Conference on Cluster Cloud and Grid Computing (CCGrid '16), Columbia, May 2016.
- Xiangbo Li**, Mohsen Amini Salehi, Magdy Bayoumi, “*High Performance Online Video Transcoding Using Cloud Services*”, in Proceedings of the 16th ACM/IEEE International Conference on Cluster Cloud and Grid Computing (CCGrid '16), Columbia, May 2016.
- Xiangbo Li**, Mohsen Amini Salehi, Magdy Bayoumi, “*VLSC: Video Live Streaming Based On Cloud Services*”, in Proceedings of the 6th IEEE International Conference on Big Data and Cloud Computing Conference (BDCloud '16), Atlanta, GA, USA, Oct. 2016.
- 2015 **Xiangbo Li**, Mohsen Amini Salehi, Magdy Bayoumi, “*Cloud-Based Video Streaming for Energy- and Compute-Limited Thin Clients*”, Presented in Stream2015 Workshop at Indiana University, Oct. 2015.
- 2014 Tarek A. Elarabi, A. Sammoud, **Xiangbo Li**, Magdy Bayoumi, “*Hybrid wavelet - DCT intra prediction for H.264/AVC interactive encoder*”, in Proceedings of the IEEE China Summit & International Conference on Signal and Information Processing (ChinaSIP), July 2014.

PATENTS

- 11/2016 **Xiangbo Li**, Mohsen Amini Salehi, Magdy Bayoumi, “*High Performance On-Demand Video Transcoding Using Cloud Services*”, U.S. Provisional Patent, filed Nov. 2016.

HONORS & AWARDS

- 10/2016 Best Presentation Award, The School of Computing and Informatics Research Day, UL Lafayette, LA
- The 2nd Place Award of Research Accomplishment Competition, The School of Computing and Informatics Research Day, UL Lafayette, LA
- 04/2016 Goodwill Ambassador of Lafayette, Lafayette Consolidated Government, LA
- 03/2010 The First Place, China National Undergraduate Electronic Information Practice and Innovation Works, China

PROFESSIONAL & VOLUNTEER SERVICES

- 09/2016 Director Assistant of Lafayette International Center, Beautiful China Exhibition and Dinner hosted by China National Tourism Administration, Houston, TX
- 01/2015-03/2016 Sponsorship Coordinator of TEDxVermilionStreet, Lafayette, LA
- 01/2014-12/2014 President of Chinese Students & Scholars Association at University of Louisiana at Lafayette, Lafayette, LA
- 01/2013-05/2014 Vice President of IEEE-CS Student Chapter, University of Louisiana at Lafayette, Lafayette, LA
- 09/2011-09/2012 Conference Secretary of International Conference on New Theories, Discoveries and Applications of Superconductors (New3SC-9), Rome, Italy