

Jeongkyu Lee

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Multimedia Information Group (MIG)
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Areas of Expertise: Teaching and Research

Data Analytics and Big Data: primary research and teaching focus.

- Hadoop big data systems and data analytics
- NoSQL databases, conceptional and physical database modeling
- Social media data analysis, influential users, and topological data analysis

Machine Learning: video data mining, deep learning, machine learning applications using cloud computing, and autonomous vehicles with deep neural networks.

Multimedia Databases: multimedia data processing, video data mining, object detection and recognition using deep learning, and wireless capsule endoscopy videos.

Computer Science Education: object-oriented programming (Java, Python), data structures, operating systems, database, advanced database systems, microprocessor, distributed database systems, image processing and algorithm.

Education

Ph.D. in Computer Science and Engineering, Aug. 2006.

University of Texas at Arlington

Thesis title: *A Graph-based Approach for Modeling and Indexing Video Data*.

Advisor: Dr. JungHwan Oh.

M.S. in Computer Science, Aug. 2001.

Graduate School Sogang University, Seoul, Korea.

Thesis: *Management of Heterogeneous DBMSs under Internet Environment*.

Advisor: Dr. Seog Park.

B.S. in Mathematics Education, Feb. 1996.

Sungkyunkwan University, Seoul, Korea.

Appointments

Professor, Sep. 2016 – Present.

Department of Computer Science and Engineering, University of Bridgeport.

Associate Professor, Sep. 2012 – Aug. 2016.

Department of Computer Science and Engineering, University of Bridgeport.

Advisory Professor, 2012.

Division of Information Technology, Hana Bank Korea.

Assistant Professor, Sep. 2006 – Aug. 2012.

Department of Computer Science and Engineering, University of Bridgeport.

Academic Work Experience

University of Bridgeport, Aug. 2006 – Present.

All lectures from Fall 2017 (marked with *) are available at YouTube channel at:

<https://www.youtube.com/user/TheUBridgeport/playlists>

- Develop new concentration: “Big Data and Data Analytics” in CSE program, 2015
- CPSC 651: Big Data Systems and Analytics* (Graduate Course)
- CPSC 652: Hadoop and NoSQL database* (Graduate Course)
- CPSC 552: Data Mining* (Graduate Course)
- CPSC 592: Parallel and Distributed Databases (Graduate Course)
- CPSC 550: Multimedia Database Systems (Graduate Course)
- CPSC 551: Advanced Database Design (Graduate Course)
- CPSC 540: Image Processing (Graduate Course)
- CPSC 503: Advanced Operating Systems* (Graduate Course)
- CPEG 308: Operating Systems* (Undergraduate Course)
- CPSC 350: Database Design* (Undergraduate Course)
- CPEG 349/CPSC 349: Senior Design Project (Undergraduate Course)
- ENGR 400: Engineering Colloquium Series* (Graduate Seminar Course)

Wuhan University and Science and Technology, China, Dec. 2014 – Present.

- Visiting Professor and taught classes during winter break
- CPSC 101: Introduction to Computing* (Undergraduate Course)
- CPSC 102: Data Structure (Undergraduate Course)
- EE 286: Introduction to Microprocessor (Undergraduate Course)

Google Computer Science Summer Institute Extension at UB, July 2019.

- Director of Google CSSI-extension at UB in Summer 2019
<https://www.bridgeport.edu/google-computer-science-summer-institute>
- UB: Partner University with Google (one of 10 universities nationwide)
<https://cssiextension.withgoogle.com/>

Young Data Science (YDS) Summer Camp for K-12, Aug. 2016 – Present.

- **Anyone Python Season 1 and 2**, May 2020 – Present
Online Python class during COVID-19 Pandemic (<https://bit.ly/AnyPython>)
- **Data Science Ambassador Computer Science (DSA-CS)**, Pepperdine, CA, 2018 – 2019 (<https://www.facebook.com/leadership.camp>)
- **Young Data Science (YDS) Summer Camp** for High School Students, Bridgeport, CT, 2016 – 2017 (<http://www.lbpt.bridgeport.edu/~jelee/yds/>)

Online CS Content

- **UB Online Computer Science courses** taught by Prof. Jeongkyu Lee:
(<https://www.youtube.com/user/TheUBridgeport/>)

- **Anyone Python Season 1:** Online Python Class for Introduction to CS and Python with Karel robot (<http://bit.ly/AnyPython01>)
- **Anyone Python Season 2:** Operating Systems and Command Line Interface with Git-bash (<https://bit.ly/AnyPython>)
- **AtoI Autonomous Car:** Online lecture for Autonomous Car using Raspberry Pi 4 (Language: Korean, <http://bit.ly/AtoICAR>)

Work Experience in Industry

Senior Database Administrator & UNIX Administrator, Jan. 2001 – July 2002.
IBM Korea, e-Business Hosting Team (IDC), Seoul, Korea.

- DB2 DBA in e-Business Hosting (IBM IDC): DB2 on RS6000 and Windows 2000.
- UNIX Administrator for customer (Mirae Co., Ltd).

Junior Database Administrator, Feb. 1996 – Jan. 2001.
Hana Bank, Seoul, Korea.

- Oracle DBA in Internet Banking: Oracle 8.0 on AIX4.3 and SunOS with OPS.
- Oracle DBA in Foreign Exchange re-engineering: Oracle 8.0 on SunOS 5.6.
- Oracle DBA in Strategy Information System (CRM, PMS): Oracle 8.0 on RM600.
- Informix DBA in Data Ware housing: Informix 7.2 on RM600 and RM1000 (MPP).

Research Experience

Research Director, Sep. 2006 – Present.

Multimedia Information Group at UB (MIG@UB).

Department of Computer Science and Engineering, University of Bridgeport.

- Designing and implementing topological data analytics for social media data.
- Developing Autonomous Car kit for educational platform (AI and machine learning classes)
- Implementing marketing media data analytics platform.
- Designing and implementing Social User Mining to find missing information about social media users.
- Developing algorithms for centrality analysis and prediction of social media data.
- Developing SmartView system for Wireless Capsule Endoscopy videos with IntroMedic, Korea.
- Working on object tracking system for hybrid projectile (ARDEC: U.S. Army Armament, Research, Development & Engineering Center)
- Developing PS3 Cluster@UB for affordable high-performance computing.
- Developing algorithms for social media data mining and user profiling with PSU.
- Working on multimedia database, data mining, video processing, and ontology.
- Design and implementing automatic content analysis for video surveillance system.

Research Assistant, Sep. 2004 – Aug. 2006.

Department of Computer Science and Engineering, University of Texas at Arlington.

- Project title: *Acquisition of High-Performance Distributed Computing and Storage Infrastructure*, a grant from NSF.
- Working on implementation and testing of multimedia processing on the high-performance computing environment.

Publications

Journals and Book Chapters

1. Almgren, K., Krishna, M., Aljanobi, F., and **Jeongkyu Lee**, "AD or Non-AD: A Deep Learning Approach to Detect Advertisements from Magazines," *Entropy*, 20(12), 982, 2019.
2. Hamoud Alshammari, **Jeongkyu Lee**, and Hassan Bajwa, "H2Hadoop: Improving Hadoop Performance Using the Metadata of Related Jobs," *IEEE Trans. Cloud Computing* 6(4): 1031-1040, 2018.
3. Muhammad Fahim Uddin, **Jeongkyu Lee**, S. Rizvi, and S. Hamada, "Proposing enhanced feature engineering and a selection model for machine learning processes," *Appl. Sci.*, vol. 8, no. 4, 2018.
4. Khaled Almgren, Minkyu Kim, **Jeongkyu Lee**, "Extracting Knowledge from the Geometric Shape of Social Network Data Using Topological Data Analysis," *Entropy*, 19(7), 360, 2017.
5. Muhammad Fahim Uddin, **Jeongkyu Lee**, "Proposing stochastic probability-based math model and algorithms utilizing social networking and academic data for good fit students prediction," *Social Netw. Analys. Mining* 7(1): 29:1-29:21, 2017.
6. Khaled Almgren, **Jeongkyu Lee**, "An empirical comparison of influence measurements for social network analysis," *Social Netw. Analys. Mining* 6(1): 52:1-52:18 (2016).
7. Khaled Almgren, **Jeongkyu Lee**, "Applying an Influence Measurement Framework to Large Social Network," *Journal of Networking Technology* Volume, 7(1), 7. (2016).
8. Hamoud Alshammari, **Jeongkyu Lee** and Hassan Bajwa, "H2Hadoop: Improving Hadoop Performance using the Metadata of Related Jobs," *IEEE Transaction in Cloud Computing*, Accepted and Published in 2016.
9. Muhammad Fahim Uddin, **Jeongkyu Lee**, "We Are What We Generate - Understanding Ourselves Through Our Data," *Procedia Comput. Sci.*, vol. 95, pp. 335–344, 2016.
10. Muhammad Fahim Uddin, **Jeongkyu Lee**, "Utilizing Relevant Academic and Personality Features from Big Unstructured Data to Identify Good and Bad Fit Students," *Procedia Comput. Sci.*, vol. 95, pp. 383–391, 2016.
11. Mohammed Eltaher and **Jeongkyu Lee**, "User Profiling of Flickr: Integrating Multiple Types of Features for Gender Classification," *Journal of Advances in Information and Technology*, Vol. 6, No. 2, pp. 84-87, May, 2015. doi:10.12720/jait.6.2.84-87.
12. Hamoud Alshammari, **Jeongkyu Lee** and Hassan Bajwa, "Improving Current Hadoop MapReduce Workflow and Performance," *International Journal of Computer Applications* 116(15):38-42, April 2015.
13. Mohammed Eltaher, **Jeongkyu Lee**. "Social User Mining: Survey on Mining Different Types of Social Media Data," *International Journal of Multimedia Data Engineering and Management (IJMDEM)*, Vol. 4(4): 58-70, 2013.

14. Omar Abuzaghle, Kathleen Goldschmidt, Yasser Elleithy, **Jeongkyu Lee**. Implementing an Affordable High-performance Computing for Teaching-oriented Computer Science Curriculum, *ACM Transaction on Computing Education (TOCE)* Vol. 13(1): 3, pp. 1 – 14, 2013.
15. Yingju Chen and **Jeongkyu Lee**, “A Review of Machine-Vision-Based Analysis of Wireless Capsule Endoscopy Video,” *Diagnostic and Therapeutic Endoscopy*, vol. 2012, Article ID 418037, 9 pages, 2012.
16. Khaled Elleithy, **Jeongkyu Lee**, Tarek Sobh, Ali El-Rashedy, Jovin Joy, and Leon Manole, “Design and Implementation of Wireless Camera, Communication and Control Modules for a Transformable Unmanned Aerial Vehicle”, *the Journal of Intelligent and Robotic Systems*, 66(3), 401-414, Springer, 2012.
17. **Jeongkyu Lee**, Subodh Shah, and Pragya Rajauria. Video Ontology, *Encyclopedia of Multimedia Technology and Networking 2nd Edition* edited by Dr. Margherita Pagani. Idea Group Inc. and IIR Press, 2007.
18. Sae Hwang, JungHwan Oh, **Jeongkyu Lee**, W. Tavanapong, Piet C. de Groen, and Johnny Wong. Informative Frame Classification for Endoscopy Video. *Journal of Medical Image Analysis*, Vol 11-2, pp. 110-127, Feb. 2007.
19. JungHwan Oh, **Jeongkyu Lee** and Sae Hwang. Video Data Mining: Current Status and Challenges. *Encyclopedia of Data Warehousing and Mining* edited by Dr. John Wang. Idea Group Inc. and IIR Press, 2005.
20. JungHwan Oh, Quan Wen, **Jeongkyu Lee** and Sae Hwang. *Video Abstraction. Video Data Management and Information Retrieval* edited by Sagarmay Deb. Idea Group Inc. and IIR Press, pp. 321 – 346, 2004.
21. JungHwan Oh, **Jeongkyu Lee** and Sae Hwang. An Efficient Method for Detection of Key Objects in Video shots with Camera Motions. *Colombian Journal of Computation*. Vol.4, No.1, pp. 35 - 56. Sep. 2003.
22. JungHwan Oh, **Jeongkyu Lee**, Sanjaykumar Kote and Babitha Bandi. Multimedia Data Mining Framework for Raw Video Sequences. *Mining Multimedia and Complex Data*, Lecture Notes in Artificial Intelligence, Vol. 2797, Springer Verlag, pp. 18 - 35, 2003.

Refereed Conference Papers

23. Bashar Alhafni, Saulo Fernando Guedes, Lays Cavalcante Ribeiro, Juhyun Park, and **Jeongkyu Lee**, “Mapping Areas using Computer Vision Algorithms and Drones,” CoRR, abs/1901.00211, 2020.
24. Kiwon Sohn, **Jeongkyu Lee**, and Kevin Huang. “Miniature Humanoid Upgrade for Material Handling Tasks in Humanoid Challenge,” *Proceedings of the ASME 2019 International Mechanical Engineering Congress and Exposition*. Volume 4: Dynamics, Vibration, and Control. Salt Lake City, Utah, USA. November 11–14, 2019.
25. Muhammad Wasimuddin, Vijaleta Peterson, Karan Manoj Bhosale, and **Jeongkyu Lee**, “Branching Artificial Neural Ensemble (BRANE): Supervised Learning For Missing Data,” SNPD 2018, pp. 157-162, Pusan, South Korea, 2018.
26. Khaled Almgren, Minkyu Kim, **Jeongkyu Lee**, “Mining Social Media Data Using Topological Data Analysis,” In *Information Reuse and Integration (IRI)*, 2017 IEEE International Conference, August 2017.

27. Abdulrahman Aldhaheri and **Jeongkyu Lee**, "Event detection on large social media using temporal analysis," *Proc. of the IEEE 7th Annual Computing and Communication Workshop and Conference (CCWC)*, pp. 1-6, Las Vegas, NV, 2017.
28. Muhammad Fahim Uddin, Soumita Banerjee, **Jeongkyu Lee**, "Proposing Student Retention Algorithm by Using Social Networking Features", *Hawaii International Conferences on System Sciences HICSS-50*: Jan 4-7, 2017.
29. Khaled Almgren, **Jeongkyu Lee**, Minkyu Kim, "Prediction of Image Popularity over Time on Social network Networks," In *Proceedings of the IEEE Connecticut Conference on Industrial Electronics, Technology & Automation*. October 2016.
30. Muhammad Fahim Uddin, **Jeongkyu Lee**, "Correlating Social Networking Personality Traits With Academic Data To Improve Early Decision Making For College Admissions", *IABPAD Conference*, New Orleans, Nov 18, 2016.
31. Muhammad Fahim Uddin, **Jeongkyu Lee**, "Predicting good fit students by correlating relevant personality traits with academic/career data," *ASONAM 2016*: 968-975.
32. Muhammad Fahim Uddin, **Jeongkyu Lee**, "Noise Removal and Structured Data Detection to Improve Search for Personality Features," *ASONAM 2016*, August 18-21, 2016, San Francisco, CA, USA.
33. Muhammad Fahim Uddin, Soumita Banerjee, **Jeongkyu Lee**, "Recommender System Framework for Academic Choices: Personality Based Recommendation Engine (PBRE)," *IRI 2016*: 476-483.
34. Khaled Almgren, **Jeongkyu Lee**, Minkyu kim, "Predicting the Future Popularity of Images on Social Networks," *MISNC 2016*: 15.
35. Mohammed Eltaher and **Jeongkyu Lee**. "User Profiling of Flickr: Integrating Multiple Types of Features for Gender Classification," *International Conference on Software and Information Systems (ICSIS 2015)*, Las Vegas, NV, May 2015.
36. Mohammed Eltaher, Yawei Yang and **Jeongkyu Lee**. Gait-Based Gender Classification Using Kinect Sensor. *Proc. of the 2015 National ASEE conference*, pp. 26.808.1 - 26.808.11, Seattle, WA, June 2015.
37. Khaled Almgren, and **Jeongkyu Lee**, "A Hybrid Framework to Predict Influential Users on Social Networks," the 10th *International Conferences on Digital Information Management (ICDIM 2015)*, Jeju, South Korea, pp. 103 – 108, October 2015.
38. Khaled Almgren, and **Jeongkyu Lee**, "Who Influences Whom: Content-based Approach for Predicting Influential Users in Social Networks," *Int'l Conf. on Advances in Big Data Analytics (ABDA 2015)*, Las Vegas, NV, pp. 89 – 95, July 2015.
39. Hamoud Alshammari, Hassan Bajwa, **Jeongkyu Lee**, "Enhancing performance of Hadoop and MapReduce for scientific data using NoSQL database," in *Systems, Applications and Technology Conference (LISAT)*, 2015 IEEE Long Island, vol., no., pp.1-5, 1-1 May 2015
40. Abdulrahman Aldhaheri and **Jeongkyu Lee**, "Temporal Data Analysis for Events Detection in Social Media Data," *Proc. of the 2015 ASEE Zone I conference*, Boston, MA, 2015.

41. Saulo Fernando Guedes and **Jeongkyu Lee**, "Autonomous Piloting System for a Drone using Computer Vision Algorithms," *Proc. of the 2015 ASEE Zone I conference*, Boston, MA, 2015.
42. Mohammed Eltaher and **Jeongkyu Lee**. "User Profiling of Flickr: Integrating Multiple Types of Features for Gender Classification," *Proc. of the 2014 ASEE Zone I conference*, Bridgeport, CT, 2014.
43. Hamoud Alshammari, Hassan Bajwa, **Jeongkyu Lee**, "Hadoop Based Enhanced Cloud Architecture," *Proc. of the 2014 ASEE Zone I conference*, Bridgeport, CT, 2014.
44. Hamoud Alshammari, Hassan Bajwa, **Jeongkyu Lee**, "Hadoop based enhanced cloud architecture for bioinformatic algorithms," in *Systems, Applications and Technology Conference (LISAT)*, 2014 IEEE Long Island , vol., no., pp.1-5, 2-2 May 2014.
45. Mohammed Eltaher, Haiyang Wang, **Jeongkyu Lee**, "Motion Detection Using Kinect Device for Controlling Robotic Arm," *Proc. of the 2013 ASEE Zone I conference*, Northfield, VT, 2013.
46. Hau-Wen Chang, Dongwon Lee, Mohammed Eltaher, **Jeongkyu Lee**, "@Phillies Tweeting from Philly? Predicting Twitter User Locations with Spatial Word Usage," *In IEEE/ACM Int'l Conf. on Advances in Social Networks Analysis and Mining (ASONAM)*, Istanbul, Turkey, 111-118, August 2012.
47. Yingju Chen, **Jeongkyu Lee**, "Ulcer detection in wireless capsule endoscopy video". *ACM Multimedia 2012*: 1181-1184, Nara, Japan, 2012.
48. Skander Benayed, Ali Eltaher Mohammed, and **Jeongkyu Lee**. "Developing Kinect-Like Video Motion Detection using Canny Edge Detector," *Proceeding of 2012 New England American Society for Engineering Education Conference*, Lowell, MA, April 27-28, 2012.
49. **Jeongkyu Lee**, and Omar Abuzaghlleh. Implementing an Affordable High Performance Computing Platform for Teaching-oriented Computer Science Curriculum. *Proc. of the 2011 National ASEE conference*, Vancouver, BC, June 2011. **[Award the Best Paper]**
50. Yingju Chen, Ahmad Abushakra and **Jeongkyu Lee**. "Vision-based Horizon Detection and Target Tracking for UAVs," In the 7th International Symposium on Visual Computing (ISVC), Las Vegas, NV, September 2011.
51. Ying-ju Chen, and **Jeongkyu Lee**, Bleeding Detection in Wireless Capsule Endoscopy Videos using Temporal Features, *In the 15th IASTED International Conference on Robotics and Applications (RA 2010)*, Cambridge, MA, November 2010.
52. Hau-Wen Chang, Hung-sik Kim, Shuyang, Li, **Jeongkyu Lee**, and Dongwon Lee, Comparative Study on Subject Classification of Academic Videos using Noisy Transcripts, *In IEEE Int'l Conf. on Semantic Computing (ICSC)*, Pittsburgh, PA, September 2010.
53. JungHwan Oh, Xiaohui Yuan, **Jeongkyu Lee**, and Shou Jiang Tang. Abnormal Image Detection Using Texton Method in Wireless Capsule Endoscopy Videos, *In the Int'l Conf. on Medical Biometrics (ICMB 2010)*, Hong Kong, China, June 28-30, 2010.
54. Alan Gilbert Seelan, and **Jeongkyu Lee**. Developing Integrated Engine for Database Administrator and Developer, *Proceeding of 2008 New England American Society for Engineering Education Conference*, Boston, MA, May 7-8, 2010.

55. Hung-sik Kim, Hau-Wen Chang, **Jeongkyu Lee**, Dongwon Lee. BASIL: Effective Near-Duplicate Image Detection using Gene Sequence Alignment. *In The 32nd European Conf. on Information Retrieval (ECIR)*, Milton Keynes, UK, March 2010.
56. Munther Abualkibash, James Gedney, Yongbom Kim, **Jeongkyu Lee**. A Hierarchical Approach to Landmarks Detection in Taekwondo Poomsae Videos. *In the 2nd Int'l Conf. on Computer Science and its Applications (CSA)*, Jeju, Korea, December 2009.
57. Hung-sik Kim, Jau-Wen Chang, Haibin Liu, **Jeongkyu Lee**, and Dongwon Lee. A Novel Image Matching Method using Biological Gene Sequence Alignment. *In IEEE Int'l Conf. on Image Processing (ICIP)*, Cairo, Egypt, November 2009.
58. **Jeongkyu Lee**, and Jalpa Bani. Adapting Anti-Plagiarism Tool into Coursework in Computer Science and Engineering Program. *Proc. of the 2009 National ASEE conference*, Austin, TX, 2009.
59. **Jeongkyu Lee**. Remodeling Database Courses for Students of a new Ph.D. Program in Computer Science and Engineering. *Proceeding of 2009 New England American Society for Engineering Education Conference*, Bridgeport, CT, April 2009.
60. Yingju Chen, Wisam Yassen, **Jeongkyu Lee**, Dongha Lee, and Yongho Kim. Developing assessment system for wireless capsule endoscopy video based on event detection. *Proc. of SPIE Medical Imaging*. Feb. 7 - 12, 2009. Orlando, FL.
61. Dongwon Lee, Hung-Sik Kim, Eun Kyung Kim, Su Yan, Johnny Chen, and **Jeongkyu Lee**. LeeDeo: Web-Crawled Academic Video Search Engine, *Workshop on Data Semantics for Multimedia Systems and Applications in conjunction with ISM2008*, Dec. 15-17, 2008. Berkeley, CA.
62. Hungsik Kim, **Jeongkyu Lee**, Haibin Liu, and Dongwon Lee, Video Linkage: Group Based Copied Video Detection, *Proceeding of International Conference on Image and Video Retrieval (CIVR 2008)*, July 7-9, Niagara Falls, Canada, 2008.
63. Padmini K. Ramalingam, Munther Abualkibash, Rajendara Tadvi, and **Jeongkyu Lee**. Ontology Creation for Wireless Capsule Endoscopy. *Proceeding of 2008 New England American Society for Engineering Education Conference*, West Point, NY, March 28-29, 2008.
64. **Jeongkyu Lee**. STRG-QL: Spatio-Temporal Region Graph Query Language for Video Databases. *Proc. of SPIE IS&T Electronic Imaging*. SPIE Vol. 6820, pp. 68200P1-12, Jan. 27 - 31, 2008. San Jose, CA.
65. **Jeongkyu Lee**, Munther H. Abualkibash, and Padmini K. Ramalingam. Ontology-based Shot Indexing for Video Surveillance System. *Proc. of CISSE 2007*, Dec. 3 - 12, 2007.
66. Subodh K. Shah, **JeongKyu Lee**, and M. Emre Celebi. Classification of Bleeding Images in Wireless Capsule Endoscopy using HSI Color Domain and Region Segmentation. *Proceeding of 2007 New England American Society for Engineering Education Conference*, Kingston, RI, April 2007.
67. M. Emre Celebi, Hassan A. Kingravi, and **Jeongkyu Lee**. Fast and Accurate Border Detection in Dermoscopy Images Using Statistical Region Merging. *Proceeding of SPIE Medical Imaging*, Feb. 17 - 22. San Diego, CA, USA, 2007.
68. **Jeongkyu Lee**, JungHwan Oh, Xiaohui Yuan, and Shou Jiang Tang. Automatic Classification of Digestive Organs in Wireless Capsule Endoscopy Videos. *Proc. of the*

ACM Symposium on Applied Computing 2007 (ACM SAC 2007). March 11 - 15, 2007. Seoul, Korea. (33% Acceptance rate)

69. **Jeongkyu Lee**, A Model-based Conceptual Clustering of Moving Objects in Video Surveillance, *Proc. of SPIE IS&T Electronic Imaging*. SPIE Vol. 6506 650602 1 - 12, Jan. 28 - Feb. 1, 2007. San Jose, CA.
70. **Jeongkyu Lee**, A graph-based approach for modeling and indexing video data, *Proceeding of the IEEE International Symposium on Multimedia 2006 (ISM 2006)*. pp. 348 – 355, Dec. 11-13, 2006. San Diego, CA.
71. **Jeongkyu Lee**, JungHwan Oh, and Sae Hwang. Scenario based Dynamic Video Abstractions using Graph Matching. *Proc. of the 13th ACM International Conference on Multimedia (ACM Multimedia)*. pp. 810–819, Singapore, Nov. 6-12, 2005. (16% acceptance rate)
72. Sae Hwang, JungHwan Oh, **Jeongkyu Lee**, Wallapak Tavanapong, Johnny Wong, Yu Cao, Danyu Liu, and Piet C. de Groen. Automatic Measurement of Quality Metrics for Colonoscopy Videos. *Proc. of the 13th ACM International Conference on Multimedia (ACM Multimedia)*. pp. 912–921, Singapore, Nov. 6-12, 2005. (16% acceptance rate)
73. **Jeongkyu Lee**, JungHwan Oh, and Sae Hwang. Clustering of Video Objects by Graph Matching. *Proc. of the 2005 IEEE International Conference on Multimedia and Expo (ICME)*. pp. 394 – 397, Amsterdam, Netherlands, July, 2005. (22% acceptance rate)
74. **Jeongkyu Lee**, JungHwan Oh, and Sae Hwang. STRG-Index: Spatio-Temporal Region Graph Indexing for Large Video Databases. *Proc. of 2005 ACM SIGMOD International Conference on Management of Data*. pp. 718 – 729, Baltimore, MD, June 14 - 16, 2005. (15% acceptance rate)
75. Y. An, S. Hwang, J. Oh, W. Tavanapong, P. C. de Groen, J. Wong, and **Jeongkyu Lee**. Informative Frame Filtering in Endoscopy Videos. *SPIE Medical Imaging*, San Diego, CA, Jan., 2005.
76. JungHwan Oh, **Jeongkyu Lee** and Sanjaykumar Kote. Real Time Video Data Mining for Surveillance Video Streams. *Proc. of the 7th Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD)*. pp.222-233, Seoul, Korea, Apr. 30- May 2, 2003.
77. JungHwan Oh, **Jeongkyu Lee** and Eswar Vemuri. Efficient Technique for Segmentation of Key Object(s) from Video Shots. *Proc. of International Conference on Information Technology: Coding and Computing*. pp.384 -388, Las Vegas, NV, Apr.28 - 30, 2003.

Grants

Funded

- 2018: MIAS (Media Intelligence and Automation System), Data-Core Systems Inc., \$34,000 (Contractor: Dr. **Jeongkyu Lee**, Completed)
- 2017: Machine Learning for Enhanced Business Intelligence system, Intro-Act Inc., \$2,400 (Contractor: Dr. **Jeongkyu Lee**, Completed)
- 2016: Drone Map Creator using Computer Vision Techniques, Seed money grant at UB, \$10,800 (PI: Dr. **Jeongkyu Lee**, Completed)

- 2014: SUM (Social User Mining): Mining Profile Information of Users in Social Network Sites, Seed money grant at UB, \$5,800 (PI: Dr. **Jeongkyu Lee**, Completed)
- 2010 – 2011: Advanced Technology in Support of Hybrid Projectiles, FY 2010 Defense Appropriation Request, \$2.4 million (Senior Investigator: **Jeongkyu Lee**, Funded)
- 2009: Development of a travel grant, U.S. Army Armament, Research, Development & Engineering Center (ARDEC), \$900.00 (**Jeongkyu Lee**, Funded)
- 2009: JusTDo: Developing Automatic Judging System for Taekwondo Poomsae Videos, Seed money grant at UB, \$10,000 (PI: Dr. **Jeongkyu Lee**, Completed)
- 2008 – 2009: Hybrid Projectile Design, U.S. Army Armament, Research Development & Engineering Center (ARDEC), \$57,688 (Co-PI: Dr. **Jeongkyu Lee**, Completed)
- 2008 – 2009: A Proposal for the Developing Smart View Module in Wireless Capsule Endoscopy Videos, IntorMedic Co., Ltd., \$65,000 (PI: Dr. **Jeongkyu Lee**, Completed).

Pending

- 2020 – 2025: Capacity Building for Student Success in Engineering and Computer Science (Project Success), National Science Foundation NSF S-STEM Track 1, \$649,997 (Co-PI: **Jeongkyu Lee**, Pending)

Patents

- **Jeongkyu Lee**, Youngho Kim, Youngdae Seo, Dongha Lee, Method and System for Processing Visual Images of Digestive System, US Patent Application No 12/334,423, Publication No. US-2010-0150416-A1, December 2008 (filed and published).
- **Jeongkyu Lee**, Yongbum Kim, Automated Scoring System for Sports Games, US Provisional Patent Application No 61/172,728, May 2009 (filed).

Certificates

- AWS Faculty Cloud Ambassador, AWS Educate, 2020 – 2021
- AWS Cloud Foundation (ACF) Certificate, Amazon, 2020
- Oracle Certified Administrator for 7.3 and 8.0, Oracle Co., June 1998.
- Junior and High School Teacher's Certificate for Mathematics, Korea, Feb. 1996

Awards and Honors

- STEM (Science, Technology, Engineering & Mathematics) Doctoral Research and Assistant Fellowship, University of Texas at Arlington, \$6,000/y, 2005 – 2006.
- J. T. Hermann Ph.D. Fellowship, University of Texas at Arlington, \$1,000/y, 2002–2006.
- Outstanding Master Thesis Award, Sogang University, 2001.
- Student Scholarship Award, Sungkyunkwan University, 1991 – 1992.

Professional Activities

Chair of

- CIT session of US-Korean Conference (UKC) 2020, LA, CA, December 2020

- CIT session of US-Korean Conference (UKC) 2019, Chicago, IL, 2019
- 4th International Workshop on Multimedia Data Mining and Management (MDMM'13) in conjunction with DEXA, Sep. 2013, Prague, Czech Republic.
- 1st ~ 3rd International Workshop on Multimedia Data Mining and Management (MDMM) in conjunction with DEXA

Program Committee of

- International Conference on Digital Information Management (ICDIM), October 2015
- International Conference on Emerging Databases (EDB 2010 – 2014).
- IADIS International Conference Visual Communication 2012, July 2012.
- ACM International Conference on Signal Processing and Multimedia Applications (SIGMAP 2009), July 2009.
- International Conference on Emerging Databases (EDB 2009), August 2009.
- IEEE International Workshop on Data Semantics for Multimedia Systems and Applications (DSMSA2008), December 2008.
- IEEE International Conference on Semantic Computing, Santa Clara, CA, August 2008.
- ACM International Conference on Signal Processing and Multimedia Applications (SIGMAP 2008), July 2008.
- International Joint Conferences on Computer, Information, and System Sciences, and Engineering (CISSE 2007), December 2007.
- ACM International Conference on Signal Processing and Multimedia Applications (SIGMAP 2007), July 2007.
- Information Resources Management Association (IRMA 2007), May 2007.
- IEEE International Symposium on Multimedia (ISM 2006), Dec. 2006 (Session chair of Special Track on Doctoral Dissertation in Multimedia)

Member of

- Korean Computer Scientists and Engineers Association in America (KOCSEA)
- Korean-American Scientists and Engineers Association (KSEA)
- Association for Computing Machinery (ACM)
- Institute of Electrical & Electronics Engineers (IEEE)
- American Society for Engineering Education (ASEE)
- Connecticut Delta Chapter of the Upsilon Pi Epsilon Honor Society at UB (UPE)

Services

- Co-Chair of College Personnel Committee (Business, Engineering and Education), 2019 – Present.
- President of Korean Computer Scientists and Engineers Association in America (KOCSEA) 2015.
- Curriculum Committee of School of Engineering at University of Bridgeport, 2014 – Present.

- Faculty Research Council representing School of Engineering at University of Bridgeport, 2008 – 2012.
- Committee member of Academic Concern Committee in Faculty Council at University of Bridgeport, 2008 – Present.
- Chair of Faculty Search Committee at Department of Computer Science and Engineering, University of Bridgeport, 2008 – 2009.
- Committee member of Faculty Search at Department of Computer Science and Engineering, University of Bridgeport, 2008 – 2009.
- Chair of Academic Standards Committee at School of Engineering, University of Bridgeport, 2008 – 2010.
- Committee member of Ph.D. program in Technical Management, University of Bridgeport, 2008 – 2010.
- Committee member of Biomedical Program at University of Bridgeport, 2007 – 2009.
- Campus Director of Connecticut Space Grant College Consortium (University of Bridgeport), 2006 – 2007.
- Faculty Senate of School of Engineering at University of Bridgeport, 2006 – 2010.