KYONGIL YOON

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INTERESTS

- Computerized Item Modeling (Automatic Item Generation)
- Computerized Online Adaptive Formative Assessment
- Online Mathematics Education
- Artificial Intelligence and Computer Vision (Human Recognition and Tracking in Video Surveillance)
- Video Processing and Content Analysis
- Mathematics/Geometry/Computer Science in Art

EXPERIENCE

Aug. 2006–Present	Notre Dame of Maryland University, Baltimore, MD *Associate Professor at Computer Studies Department*
2010-Present	CafaLab Inc., MD *Co-Founder, System Developer*
Summer 2022, 2023	Sungkyunkwan University, Seoul, Korea *Professor* at International Summer Semester
Jun. 2021-Aug. 2021	Korea Oceanic & Atmospheric System Technology, Seoul, Korea *Consultant*
Jun. 2020-Jan. 2021	Equalkey Corp. Seoul, Korea *Advisor & Chief Researcher*
Summer 2018, 2019	Ewha Womans University, Seoul, Korea *Professor* at International Summer College
Aug. 2017–*Dec.* 2019	Bowie State University, Bowie, MD *Adjunct Professor at Computer Science Department*
Aug. 2014-Dec. 2014	Nemustech Co., Korea *Visiting Researcher with the support by Brain Pool Scouting program of NIPA* *Developed StarTrek (Meta Information Extract System from Video)*
Aug. 2005–Jun. 2006	McDaniel College, Westminster, MD *Visiting Assistant Professor at Computer Science Department*
Jan. 2001–Aug. 2005	University of Maryland, College Park, MD *Research Assistant at Computer Vision Lab.*
Jun. 1998–Jan. 2001	University of Maryland, College Park, MD *Research Assistant at Language and Media Processing Lab., CfAR.*
Sep. 1996–May. 1998	University of Maryland, College Park, MD *Teaching Assistant at Computer Science Department.*
Mar. 1992–Jun. 1996	Samsung Electronics, Co., Ltd., Kiheung, Korea *Senior Research in Multimedia Group*
Feb. 1990–Feb. 1992	Samsung Advanced Institute of Technology, Kiheung, Korea *Research in Multimedia Group*

EDUCATION

1997–2005	University of Maryland at College Park	College Park, MD
	Ph.D. in Computer Science	
	Thesis title: *Key-frame Appearance Analysis for Video Surveillance*	
1988–1990	Seoul National University	Seoul, Korea
	M.S. in Computer Science	
1984–1988	Seoul National University	Seoul, Korea
	B.S. in Computer Science and Statistics	

TEACHING & COMPUTER SKILLS

- Courses taught
  - Programming Languages and Concepts
    - C++, Visual Basic, Python, Java
  - Fundamentals of Information System
  - Web Page Design (HTML, CSS, JavaScript)
  - Web Animation (Adobe Flash, HTML5 Canvas and JavaScript)
  - Data Structures/Algorithms
  - Database Concepts
  - Artificial Intelligence
  - Data Tools
  - Data Visualization
  - Telecommunication and Networking
  - Software Engineering
- Operating Systems and Computer Languages
  - C, C++, Java, Python, R, ASP, JavaScript, Visual Basic, Php
  - Unix, Linux, Windows, Amazon AWS, WordPress Plugin
  - Robot Operating System
  - DBMS: MySQL, SqlServer, MS Access

PUBLICATIONS

- Choi, J., Yoon, K., & Kim, S. (2019). Computerized Item Modeling Practice with CAFA Automatic Item Generation. Clarksville, MD: CAFA Lab, Inc.
- Choi, J., Kim, S., & Yoon, K. (2017). CAFA AIG Manual: Computer Adaptive Formative Assessment Automatic Item Generation User's Guide [System Manual], 2nd edition. Clarksville, MD: CAFA Lab, Inc.
- Choi, J., Kim, S., & Yoon, K. (2017). K-Math Workbook Grade 7. Clarksville, MD: CAFA Lab, Inc., ISBN/EAN13: 0998129801 / 9780998129808
- Choi, J., Kim, S., & Yoon, K. (2016). K-Math Workbook Grade 6. Clarksville, MD: CAFA Lab, Inc., ISBN/EAS13: 0998129860 / 9780998129860

- Geometric Constructions of Korean Danchong Patterns And Building Platonic Solids Kyongil Yoon, Hyunkyung Kim and Reza Sarhangi, *Bridges Conference, Seoul, Korea, 2014*

- CAFA (Computer Adaptive Formative Assessment™) Client Application: Automatic Item Generation™ (v 1.0 Beta) [Computer System], Choi, J., Kim, S., & Yoon, K. eMathTest, Inc. 2014

- CAFA (Computer Adaptive Formative Assessment) Smart Workbook (v 1.0 Beta) System: CAFA Client Application for Common Core Math Workbook [Computer System], Choi, J., Kim, S., & Yoon, K., eMathTest, Inc., 2014

- CAFA (Computer Adaptive Formative Assessment) Smart Assignment (v 1.0 Beta) System: CAFA Client Application for School Assignments [Computer System], Choi, J., Kim, S., & Yoon, K., eMathTest, Inc., 2014

- CAFA (v 1.0 Beta) System: Computer Adaptive Formative Assessment System for Educational Services [Computer System], Choi, J., Kim, S., & Yoon, K., eMathTest, Inc., 2012

- Analytical Calculation of Geodesic Lengths and Angle Measures on Sphere Tiling of Platonic and Archimedean Solids, Kyongil Yoon, *Bridges Conference, Towson, USA, 2012*

- ezIA (v 1.0.0): A Microsoft Excel Add-In for test item analysis Choi, J., Kim, S., & Yoon, K., 2009 [Computer software].

- Background Subtraction Enhancement using Segmentation Kyongil Yoon, *Ninth ACIS International Conference on Software Engineering, Artificial Intelligence, Networking, and Parallel/Distributed Computing, 2008, Phuket, Thailnad*

- Appearance-based Human Gallery Construction from Video Kyongil Yoon, Yaser Yacoob, David Harwood, *International Conference on Signal Processing and Multimedia Applications, Jul. 28-31, 2007, Barcelona, Spain*

- Human Appearance Modeling for Matching across Video Sequences Yang Yu, Kyongil Yoon, David Harwood, Larry Davis, *Machine Vision and Applications, 2007*

- Appearance-based Person Recognition using Color/Path-Length Profile Kyongil Yoon, David Harwood, Larry Davis *A special issue on the topic of Real-Time Imaging in 'Journal of Visual Communication and Image Representation' 2006*

- Key-frame Appearance Analysis for Video Surveillance Kyongil Yoon *Ph.D. Thesis, University of Maryland, 2005*

- Event Detection from MPEG Video in the Compressed Domain Kyongil Yoon, Daniel DeMenthon, David Doermann *International Conference on Pattern Recognition (ICPR'00), Sep. 03-08, 2000, Barcelona, Spain*

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