

Kazi Ahmed Asif Fuad

+1 541 250 7424 ✉ fuadk@oregonstate.edu

RESEARCH INTEREST

Computer Vision, Machine Learning, Deep Learning, Explainable Artificial Intelligence and Digital System Designing

EDUCATION

Oregon State University (OSU) September 2021 - Present

Doctor of Philosophy in Computer Science

Research Area: Hardware accelerator for Machine Learning application.

Major Supervisor: Dr. Lizhong Chen, Associate Professor, Oregon State University.

Pázmány Péter Catholic University (PPCU), Budapest, Hungary September 2018 - August 2020

Universidad Autónoma de Madrid (UAM), Madrid, Spain

Université de Bordeaux (UB), Bordeaux, France

Erasmus+Mundus Joint Master Degree in Image Processing and Computer Vision (IPCVC)

Master Thesis: *Recognition of Sports Gestures with 3D Deep CNNs: Explanation of Networks.*

Supervised by: Dr. Jenny Benois-Pineau, Professor, Université de Bordeaux.

American International University-Bangladesh (AIUB) January 2014 - August 2015

Master of Science in Electrical and Electronic Engineering

Master Thesis: *Area-Efficient FPGA realization of Edge Detectors by varying sample-widths and gradient operators and utilizing Software-Hardware Co-Design.*

Supervised by: Shahriyar Masud Rizvi, Associate Professor, American International University-Bangladesh.

American International University-Bangladesh (AIUB) September 2009 - August 2013

Bachelor of Science in Electrical and Electronic Engineering

Bachelor Thesis: *Design and Implementation of Centralized Load Controlled Automated Power System Network (CLCAPSN).*

Supervised by: Laila Nawsheen Manzoor, Lecturer, American International University-Bangladesh.

EMPLOYMENT

Assistant Professor (*on study leave*) August 2016 - Present

Faculty of Engineering, American International University-Bangladesh (AIUB)

Lecturer January 2016 - July 2021

Faculty of Engineering, American International University-Bangladesh (AIUB)

RESEARCH POSITIONS

Graduate Research Assistant September 2021 - Present

The School of Electrical Engineering and Computer Science (EECS)

Oregon State University (OSU)

Invited Researcher September 2020 - August 2021

Laboratoire Bordelais de Recherche en Informatique (LaBRI)

Master Thesis Intern February 2020 - July 2020

Laboratoire Bordelais de Recherche en Informatique (LaBRI)

Openlab Summer Student July 2019 - August 2019

Openlab, European Organisation for Nuclear Research (CERN)

Teaching Assistant August 2014 - January 2016

Faculty of Engineering, American International University-Bangladesh (AIUB)

KEY PUBLICATIONS

J1 **Kazi Ahmed Asif Fuad**, Shahriyar Masud Rizvi, “Hardware Software Co-Simulation of Canny Edge Detection Algorithm” International Journal of Computer Applications 122(19):7-12, July 2015.

J2 **Kazi Ahmed Asif Fuad**, Shahriyar Masud Rizvi, “Varying Sample-Width to Realize Area-Efficient FPGA Realization of Sobel-Fieldman Edge Detector”, AIUB Journal of Science and Engineering (AJSE) Vol. 14, No. 1, August 2015 (ISSN: 1608-3679).

- C1 **K. Ahmed Asif Fuad**, P. -E. Martin, R. Giot, R. Bourqui, J. Benois-Pineau and A. Zemmari, “Features Understanding in 3D CNNs for Actions Recognition in Video,” 2020 Tenth International Conference on Image Processing Theory, Tools and Applications (IPTA), Paris, 2020, pp. 1-6, doi: 10.1109/IPTA50016.2020.9286629.

TECHNICAL EXPERTISE

Digital System Designing

Languages VHDL, Verilog, SystemVerilog, and C++(Vivado HLS)
EDA Tools Xilinx Vivado HLS, Aldec Active HDL, Precision RTL, and MATLAB System Generator

Image Processing & Computer Vision

Languages C, C++, Python, MATLAB
Libraries PyTorch, TensorFlow, Keras, Numpy, OpenCV
Web and Database Tools PHP, JavaScript, HTML, CSS, Oracle 9i and MySQL
Tools L^AT_EX, Git

HONORS AND AWARDS

- **Erasmus Mundus Joint Master (EMJMD) scholarship** for Master in Image Processing and Computer Vision (IPCV), covering full tuition fees and monthly stipend (total 42,000 EUR). Secured second position among 450 applicants from all over the world in the selection of EMJMD Scholarship (IPCV).
- Highest Academic Honor, **Summa Cum Laude**, for graduating with a CGPA of 4.00 in Master of Science in Electrical and Electronic Engineering, American International University-Bangladesh. The only CGPA 4.00 in the convocation year.
- “**Vice-Chancellor’s Best Thesis Award**” for MSc. Thesis among all the Master Theses in the 16th convocation of American International University-Bangladesh. Only one thesis is awarded each convocation year.
- “**Vice-Chancellor’s Best Thesis Award**” for BSc. Project and Thesis among 171 Theses in the 14th convocation of American International University-Bangladesh. Only one thesis is awarded each convocation year.

INVITED WORKSHOPS AND TALKS

- Seminar on AIUBians on Erasmus, organized by Erasmus Mundus Association and IEEE AIUB Student Branch, Bangladesh on July 31, 2020.
- Technical Talk on Recognition of Sports Gesture with 3D Deep CNNs: Explanation of Networks, organized by Laboratoire Bordelais de Recherche en Informatique (LaBRI), Bordeaux, France on June 18, 2020.
- CERN Openlab Lightning Talks on Graph Neural Network (GNN) Inference on FPGA, organized by CERN Openlab at CERN, Geneva, Switzerland on August 15, 2019.
- Workshop on Arduino, organized by IEEE AIUB Student Branch at American International University-Bangladesh (AIUB), Bangladesh on March 28, 2015.
- Workshop on PCB Fabrication, organized by IEEE AIUB Student Branch at American International University-Bangladesh (AIUB), Bangladesh on July 2, 2015.

CO-CURRICULAR ACTIVITIES

- Volunteer, Erasmus Mundus Association-Bangladesh (EMA-BD) since January 2020.
- AIUB Community of Engineering Students (ACES) Alumnus and Research Group Coordinator from January 2015 to August 2018.
- Motivator, IEEE AIUB Student Branch since May, 2016 to August 2018.