

## Imtiaz Masud Ziko

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CONTACT INFORMATION	Email: <a href="mailto:ziko.iut@gmail.com">ziko.iut@gmail.com</a> Homepage: <a href="https://imtiazziko.github.io/">https://imtiazziko.github.io/</a> LinkedIn: <a href="http://www.linkedin.com/in/imtiazmasud">http://www.linkedin.com/in/imtiazmasud</a>
RESEARCH INTEREST	Unsupervised learning, Domain adaptation, Deep Metric learning, Optimization methods in learning.
EDUCATION	<p><b>École de Technologie Supérieure – University of Quebec</b>, Canada.</p> <p>PhD in Computer Science, May 2016 to May 2020 (Expected)</p> <p>Supervisor: Prof. Ismail Ben Ayed &amp; Prof. Eric Granger (Co-supervisor)</p> <p><b>Erasmus Mundus Masters in Color in Informatics and Media Technology (CIMET)</b></p> <p><b>Norwegian University of Science and Technology (NTNU)</b>, Norway. <b>University of Granda</b>, Spain. <b>Université Jean Monnet</b>, France. Sept 2012 to Oct 2014</p> <p><b>Islamic University of Technology (IUT)</b>, Bangladesh</p> <p>Bachelor of Science (Honors), Jan 2008 to Nov 2011 Computer Science and Information Technology</p>
WORK EXPERIENCE	<p><b>PhD Candidate</b> (Machine Learning) May 2016 to Present</p> <p>École de Technologie Supérieure – University of Quebec, Montreal, Canada.</p> <p><b>Lecturer</b> Jan 2015 to Dec 2015</p> <p>Computer Science and Engineering Department, American International University-Bangladesh, Dhaka, Bangladesh.</p> <ul style="list-style-type: none"><li>• <b>Courses:</b> Computer Vision and Pattern Recognition, Computer Graphics, Algorithm Design, Programming Language 1 (C/C++).</li></ul> <p><b>Research Intern</b> Jan 2014 to Jul 2014</p> <p>Hubert Curien Laboratory, St. Etienne, France.</p> <ul style="list-style-type: none"><li>• <b>Research topic:</b> Subspace learning in Bag of Words (BOW) model for image classification.</li></ul> <p><b>Software Developer</b> Oct 2010 to Dec 2010</p> <p>Right Brain Solution Ltd, Dhaka, Bangladesh.</p> <ul style="list-style-type: none"><li>• Developed a ticket management system for a website for customer relationship management using Codeigniter framework, PHP and MySQL.</li></ul>

RECENTLY  
WORKING ON

**Fairness in clustering algorithms.**

**Domain Adaptation in semantic segmentation.**

**Improved loss functions in metric learning for Person re-ID.**

**Scalable Laplacian K-modes.**

- Published in **Neurips** 2018.

PREVIOUS  
ACADEMIC  
PROJECTS

**Spectral subspace clustering for visual dictionary creation in the context of image classification.**

Hubert Curien Laboratory, France.

2014

- Published in **ACPR** 2015.

**Design and Creation of a Multi-Illuminant Scene Image Dataset for Color Constancy Research**

The Norwegian Colour and Visual Computing Laboratory - Norwegian University of Science and Technology.

2013

- Published in **ICISP** 2014.

**Waste sorting using multi-spectral imaging and machine learning methods.**

ZenRobotics (Finland), University of Eastern Finland and Norwegian University of Science and Technology.

2013

- Multi-spectral imaging for better waste sorting systems. Experimented with SVM, Random forest on multi-spectral high dimensional data to identify different kinds of materials (plastics, papers, stones etc).

**Exploiting saliency map to improve similar image retrieval by image search**

Norwegian University of Science and Technology.

2013

- Exploiting visual saliency map from the image to improve image retrieval where ranking of images is done based on similarity using region based saliency map and LBP features.

**Formulate an enhanced adaptive median filtering technique to remove high density salt and paper noise from digital image**

Islamic University of Technology (IUT)

2011

- Published in **ICCIT** 2011.

SKILLS AND  
INTEREST

- **Programming:** Python, C++, MATLAB.
- **Deep learning libraries:** Pytorch, Tensorflow.
- Experienced in using Numpy, Numba JIT, Cython, Scipy, Opengl, OpenMP, Scikit-learn, Cuda kernel, Matplotlib.
- **Web Programming:** HTML, CSS, PHP, Codeigniter, jQuery, MYSQL.
- Git, Inkscape, Latex.
- Hands on experience in using Spectrophotometer, Spectroradiometer, Machine vision lighting system and capturing devices.
- **Languages:** Bengali (native), English, French (basic).
- **Organizer** – IPTA 2017 (ETS), ICT FEST 2011 (IUT).
- **Interests and hobbies:** Reading, Guitar playing. **Sports**– soccer, cricket, badminton, played in Inter-School cricket and soccer tournaments held in 2004 and 2005.

PUBLICATIONS

1. Imtiaz Masud Ziko, Eric Granger, Jing Yuan and Ismail Ben Ayed. "Clustering with Fairness Constraints: A Flexible and Scalable Approach". *arXiv*, 2019.

2. Imtiaz Masud Ziko, Eric Granger and Ismail ben Ayed. “Scalable Laplacian K-modes”. *Neural Information Processing Systems conference (NIPS)*, Montreal, Canada, December 2018. (*Spotlight*)
3. Imtiaz Masud Ziko, Elisa Fromont, Damien Muselet and Marc Sebban. “Supervised Spectral Subspace Clustering for Visual Dictionary Creation in the Context of Image Classification.” *Asian Conference on Pattern Recognition (ACPR)*, IEEE, November 2015.
4. Imtiaz Masud Ziko, Shida Beigpour and Jon Y. Herdeberg. “Design and Creation of a Multi-Illuminant Scene Image Dataset.” *International Conference on Image and Signal Processing (ICISP)*, Springer, 531–538, July 2014.
5. Md Imrul Jubair, Md Mizanur Rahman and Syed Ashfaqueuddin and Imtiaz Masud Ziko. “An enhanced decision based adaptive median filtering technique to remove Salt and Pepper noise in digital images.” *International Conference on Computer and Information Technology (ICCIT)*, 428–433, November 2011.

#### AWARDS & SCHOLARSHIPS

- ETS PhD fellowship.
- Erasmus Mundus Category A scholarship for Masters awarded by European Commission.
- Three Years full scholarship from OIC during Bachelor study along with stipend.
- Four years Govt. Scholarship for H.S.C from Dhaka Board.
- Two years Govt. Scholarship in Talent Pool for S.S.C from Dhaka Board.

#### SERVICES

- Review activity: ACCV 2018, IPTA 2018, 2017.

#### REFERENCES

Ismail Ben Ayed  
Associate professor,  
Research Chair on Artificial Intelligence in Medical Imaging,  
École de technologie supérieure, University of Québec  
Montreal(QC),Canada  
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Eric Granger  
Professor and Director of the LIVIA,  
Department of Automated Manufacturing Engineering,  
École de technologie supérieure, University of Québec  
Montreal(QC),Canada  
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