

# Mostafa S. IBRAHIM

## PERSONAL DATA

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| BIRTH   | Cairo, Egypt   1987  |
| ADDRESS | British Columbia, Canada   |
| PHONE   | +1 604 401 0810  |
| EMAIL   | <a href="mailto:mostafa.saad.fci@gmail.com">mostafa.saad.fci@gmail.com</a> (Primary)   <a href="mailto:msibrahi@sfu.ca">msibrahi@sfu.ca</a>                |
| LINKS   | <a href="#">Website</a>   <a href="#">Linkedin</a>   <a href="#">Github</a>   <a href="#">Google Scholar</a>   <a href="#">Quora</a>   <a href="#">Ask</a> |

## INTERESTS

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I have a mix of experience in Software Engineering, 2D Computer Vision Research and Algorithms Design. My interests are to apply **Machine Learning** to solve real-world problems.

## SKILLS

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| PROGRAMMING LANGUAGES    | C++, Java (SE,EE), Python, Matlab.  |
| COMPUTER VISION RESEARCH | Deep Learning, Action Recognition, Human Activities, Object Detection, Semantic Segmentation, Object Tracking |
| FRAMEWORKS               | Caffe, Lasnge (Theano based), TensorFlow, LibSVM, OpenCV  |
| SOFTWARE ENGINEERING     | Payment(Java EE), Storage Management (C++), Computer Vision (C++)   |
| COMPETITIVE PROGRAMMING  | ICPC World Finalist 2011, Problem Setter, Judge, Chief Judge, Coach   |

## EDUCATION

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| 2015-2018 | Ph.D. in COMPUTER SCIENCE, <b>Simon Fraser University</b> , Canada<br>SUPERVISOR Prof <a href="#">Greg Mori</a> - <b>Computer Vision</b> Field<br>Worked in Multi-person Activity Understanding<br>GPA: 3.92/4   <a href="#">My Page</a>             |
| 2010-2012 | M.Sc. in COMPUTER SCIENCE, <b>Cairo University</b> , Egypt<br>SUPERVISOR: Prof <a href="#">Amr Badr</a> , <b>Computer Vision</b> Field<br>Worked in Image Object Detection: Object Proposals Approach   <a href="#">Paper</a>                        |
| 2004-2008 | Hon. B.Sc. in COMPUTER SCIENCE, <b>Cairo University</b> , Egypt<br>GPA: 3.83/4 (3rd on class)<br>Graduation Project: Programming Online Judge, <i>Using Java, JSF Framework</i><br>Internship: IBM Egypt, Summer 2007 in Employees Evaluation System |

## WORK EXPERIENCE

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| Dec 2018-Present  | <b>Lead Computer Vision Scientist at FLEX A.I., Canada</b><br>R&D lead; Developing an app that uses innovative machine learning techniques to solve big problems in fitness/health.   |
| Mar 2018-Aug 2018 | <b>Machine Learning Research Intern at D-WAVE, Canada</b><br>Weakly Supervised Image Segmentation Project<br>Research Project toward CVPR 2019<br>Keywords: Tensorflow, PASCAL VOC, COCO<br>SUPERVISOR <a href="#">Arash Vahdat</a>   |
| May 2016-Aug 2016 | <b>Java Software Engineer Intern at GOOGLE, USA</b><br>Worked in the <b>photos team</b> : investigating a feature for the photos app<br>Designed, developed and tested the feature internally<br>My Evaluation was very positive: <b>very productive and needed minimal supervision</b><br>Google offered another internship without interviewing process<br>TEAM LEAD <a href="#">Jingyu Cui</a> |
| Aug 2014-Apr 2016 | <b>C++ Senior Vision Engineer at HERUOLABS, Germany</b><br>Worked remotely: full time for 5 months, then 40% part time during PhD<br>Developed <b>vision modules</b> in detection, object proposals and tracking<br>Developed tools to facilitate models training<br>Developed a gateway to receive vision queries and process them<br>Research investigations in some private ideas              |
| Jul 2011-Jul 2014 | <b>C++ Software Engineer at NTP, Egypt</b><br>Worked in a <b>data storage management</b> software named <a href="#">NTP QFS</a><br>Team was maintaining Disk Quota Policies to limit user consumption<br>Customizing the policies to meet the specific needs of your individual users<br>Managing file data use across: the enterprise, multiple platforms, storage types                         |
| Jun 2010-Mar 2011 | <b>Research Assistant at MICROSOFT, Egypt</b><br>Computer Vision Field - Semantic Image Segmentation problem<br>Contribution: Potential values in a discrete energy minimization setup<br>Supervisor: Prof <a href="#">Dr Motaz El Saban</a> . Programming Languages: C++, Matlab   |
| Nov 2008-May 2010 | <b>Java Software Engineer at FAWRY, Egypt</b><br>Team was building a bill presentment and payment network to handle the bills through the various electronic channels available at <b>banks</b> ; including ATMs, the internet, mobile phones and point of sales.<br>Technology: Java EE(JSF web, JPA, Web services, JMS)   |

## RESEARCH PUBLICATIONS

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- **Mostafa S. Ibrahim**, Arash Vahdat. Weakly Supervised Image Segmentation, *In Progress, Toward CVPR 2019*
- **Mostafa S. Ibrahim**, Greg Mori. Hierarchical Relational Networks for Group Activity Recognition and Retrieval, in ECCV 2018. [Github](#)
- Jiawei He, Zhiwei Deng, **Mostafa S. Ibrahim**, Greg Mori. Generic Tubelet Proposals for Action Localization, in [WACV 2018](#)
- Mehran Khodabandeh, Zhiwei Deng, **Mostafa S. Ibrahim**, Shinichi Satoh, Greg Mori. Active Learning for Structured Prediction from Partially Labeled Data, in [arXiv preprint](#)

[arXiv:1706.02342](https://arxiv.org/abs/1706.02342), 2017

- **Mostafa S. Ibrahim**, Srikanth Muralidharan, Zhiwei Deng, Arash Vahdat, Greg Mori. A Hierarchical Deep Temporal Model for Group Activity Recognition, in [CVPR 2016](#). [Github](#)
- **Mostafa S. Ibrahim**, Amr A. Badr, Mostafa R. Abdallah and Ibrahim F. Eissa. Bounding Box Object Localization Based On Image Superpixelization, in [Procedia CS 2012](#)
- **Mostafa S. Ibrahim** and Motaz A. El Saban. Higher order potentials with superpixel neighbourhood (hsn) for semantic image segmentation, in [ICIP 2011](#)

## PROGRAMMING CONTESTS ACTIVITY

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- Part of SFU ACM ICPC Administration team/WPC in 2017 & 2018.
- [Coaching](#) students since 2014 (30+ trainees in 2017 and 2018).
- Judge & Problem Setter in Arabian Regional ACM ICPC 2013.
- Chief Judge in Egyptian & Jordanian National ACM ICPC in 2012.
- 2011 ACM ICPC World Finalist in Orlando, Florida - USA.
- 2nd rank 2009 and 2nd rank 2010 in Arab Collegiate Programming Contest.
- 2nd rank 2006, 5th rank 2008 and 1st rank 2009 in Egyptian National ACM ICPC.
- 8th rank in 2005 Egypt Olympiad in Informatics (EOI), Silver Medal.
- Have a [YouTube Channel](#) (250+ videos - 22k subscribers) - [Training sheet](#).

## OTHERS

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- Teaching Assistant (2008-2014), Cairo University. Courses: Programming, Software Engineering, Data Structures and Algorithms, Neural Network, Genetic Programming.
- Conducted Computer Vision Study Group in SFU in 2016.
- Organized Arabic Computer Vision [Webinar Series](#).
- Conducted Computer Vision Study Group in Cairo University in 2012-2013.
- Co-organized Machine Learning Day in Cairo University in 2011.
- Much fun: Gym, Football, Organizing BBQs, Helping students (Answered 17K questions on ask.fm).