# Mohammed Al-masni

Ph.D. in Biomedical Engineering



# **@OC** Contact Information

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### **Research Interests**

My research interests lie primarily in machine learning, deep learning, medical imaging systems, medical image processing, biomedical signal processing, and medical image reconstruction.

# **Education**

#### 09/2015 – 08/2019 Ph.D. in Biomedical Engineering

- College of Electronics and Information, Kyung Hee University, Republic of • Korea.
- **GPA:** 4.275/4.3 (Excellent). •
- **Dissertation Title:** "Computer-Aided Segmentation and Classification of Skin • Lesions in Dermoscopy Images via Deep Convolutional Networks".

#### 09/2012 – 02/2015 M.Sc. in Biomedical Engineering & Systems

- Faculty of Engineering, Cairo University, Egypt.
- GPA: 3.9/4 (Excellent).
- Thesis Title: "3D Image Reconstruction Techniques for Cone Beam Computed Tomography".

#### 09/2006 - 06/2011**Bachelor in Biomedical Engineering & Systems**

- Faculty of Engineering, Cairo University, Egypt. •
- Cumulative Grade: Very Good with honors.
- Graduation Project: "HealthCare Facilities Design".
- Graduation Project Grade: Very Good. •

# **Technical Skills**

- **Programming Languages:** Matlab, C/C++, and Python. •
- Deep Learning Frameworks: Keras, Tensorflow, and Theano. •
- **Operating Systems:** Windows and Ubuntu.
- Document Processing: Excellent knowledge of Microsoft Office (Word, Excel, and • PowerPoint) and very good in LATEX.

# **Work Experience**

09/2019 – present	Postdoctoral Researcher   Yonsei University   Seoul, South Korea
	<ul> <li>Medical Image Analysis via Deep Learning.</li> <li>Deep learning CAD systems for brain Small Vessel Diseases (SVD).</li> <li>Cerebral micro-bleed detection on medical MRI images.</li> </ul>
10/2015 – 08/2019	<ul> <li>Software Developer   B.M.Tech Worldwide Co. Ltd   South Korea</li> <li>Develop the image processing routines that deal with dual-energy x-ray absorptiometry (DXA) images.</li> <li>Develop the image segmentation algorithms to segment bone, tissue, air, and artifacts from spine, femur, and forearm DXA images.</li> <li>Develop the basic bone density and body composition analysis routines.</li> <li>Design and perform calibration tests for DXA machines.</li> </ul>
09/2015 - 08/2019	<ul> <li>Research Assistant   Bio-Imaging Lab., Kyung Hee Univ.   South Korea</li> <li>Working on many projects such as: <ul> <li>Skin Lesion Segmentation and Recognition via Deep Learning.</li> <li>Breast Cancer Detection, Segmentation, and Classification via Deep Learning.</li> <li>Dual Energy X-Ray Absorptiometry (DXA): Image Denoising and Bone Segmentation.</li> <li>Samsung Display Defects Identification via YOLO Deep Learning.</li> <li>Human Activity Recognition.</li> </ul> </li> </ul>
2018 – Present	<ul> <li>Reviewer for highly indexed Journals such as:</li> <li>IEEE Transaction on Medical Imaging, IEEE Journal of Biomedical and Health Informatics (IEEE JBHI), IEEE Access, Computer Methods and Programs in Biomedicine, Medical Engineering &amp; Physics, Neurocomputing, Journal of Medical Imaging SPIE, BMJ Open, etc.</li> </ul>
03/2015 - 08/2015	<ul> <li>Teacher Assistant   Science &amp; Technology University   Yemen</li> <li>Radiographic Equipments Course for 2<sup>nd</sup> level.</li> <li>Fundamental to Electronics Course for 2<sup>nd</sup> level.</li> </ul>
03/2015 - 08/2015	<ul> <li>Teacher Assistant   Yemeni Jordanian University   Yemen</li> <li>Digital Signal Processing Course for 3<sup>rd</sup> level.</li> </ul>
01/2012 - 09/2012	<ul> <li>Biomedical Maintenance Engineer   Modern Medical Tech. Est.   Yemen</li> <li>CT scanners, US, and Ventilator systems</li> </ul>

# **Honors and Awards**

- [2019] Best conference paper award from the 2019 IEEE Eurasia Conference on Biomedical Engineering, Healthcare and Sustainability.
- [2018] Outstanding reviewer status achieved for Neurocomputing Journal.
- [2018] Recognized reviewer status achieved for Computer Methods and Programs in Biomedicine, Medical Engineering & Physics, and Neurocomputing Journals.
- [2015] Full fund scholarship from the Kyung Hee University to pursue the Ph.D. program in Biomedical Engineering.
- [2012] Graduate Scholarship from the Ministry of Higher Education in Yemen to study M.Sc. in Biomedical Engineering at Cairo University.
- [2006] Scholarship from the Ministry of Higher Education in Yemen to pursue B.Sc. degree of engineering at Cairo University.