Fatma Usta

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I have a valid work permit in Canada

GitHub: fatmausta | LinkedIn: fatmausta

EDUCATION:

MASc. Electrical and Computer Engineering, University of Ottawa, Canada   September 2015- July 2018

- ❖ Earned 3 years research experience in 3D image analysis, two publications and a written thesis.
- ❖ Achieved to semi-automatically segment myocardial scar tissue from 3D Late-Gadolinium Enhanced Cardiac MR Images using Matlab and C++.
- ❖ Gained hands-on experience in deep learning using Python, Keras and Tensorflow on Compute Canada high speed clusters.
- ❖ Courses: Biomedical Image Processing, Medical Imaging, Pattern Recognition and Experimental Design, Biomedical Engineering, and Optimization in Engineering Applications.

BSc. Computer Engineering, Kirikkale University, Turkey   September 2009- June 2013

- ❖ Developed many desktop and web applications in C-based languages using various databases.
- ❖ Completed courses; Artificial Intelligence, Image Processing, Advanced Data Structures, Algorithm Design, Object Oriented Programming, Databases, and Web Development.

INDUSTRY EXPERIENCE:

Deep Learning Research Intern, Siemens Healthineers, Princeton, NJ, USA   March 2018- August 2018

- ❖ Conducted deep learning research to detect calcified plaques in coronary arteries from 3D CCTA images of approximately 700 patients and achieved 98% sensitivity and specificity.
- ❖ Gained hands-on experience with CNN+LSTM models in Python using PyTorch, Keras and (native) Tensorflow on distributed GPU Clusters in Linux Environment.
- ❖ Experienced working in collaboration with researchers and communicating research.

Web-Developer and Database Manager, University Hospital, Kirikkale, Turkey   September 2012- June 2013

- ❖ Encountered injection attacks to the hospital database by writing a novel encryption algorithm.
- ❖ Developed hospital website to satisfy the needs by using PHP, HTML, and SQL on Oracle database.

Software Engineer Intern, JeoIT, Ankara University TechnoCity, Turkey   July-August 2012

- ❖ Scripted a database migration interface to move bug reports to a new program using SQL and C#.

Computer Engineer Intern, Turkish Telecommunication Company, Ankara, Turkey   July-August 2011

- ❖ Developed a real-time stock automation system accessible from shared networks.
- ❖ Implemented code using Visual Basic(VB), PHP, MySQL, XML, and IIS7.

SKILLS:

Python | Matlab | PyTorch | Keras | Tensorflow | C++ | Linux | CUDA cuDNN | scikit-image | HDFS | Git | LaTex | Numpy | Matplotlib | Pandas | scikit-learn

PUBLICATIONS:

- ❖ F. Usta, W. Gueaieb, J. A. White, C. McKeen, and E. Ukwatta, "Comparison of myocardial scar geometries generated from 2D and 3D LGE MRI," p. 19, Mar. 2018, SPIE, Houston, TX.
- ❖ F. Usta, W. Gueaieb, J. A. White, and E. Ukwatta, "3D scar segmentation from LGE-MRI using a continuous max-flow method," p. 29, Mar. 2018, SPIE, Houston, TX.