# Fatma Usta

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**I have a valid work permit in Canada**

## INTRO:

I am currently developing deep learning algorithms at Siemens Healthineers in the USA. I earned my Master's degree in Electrical and Computer Engineering in Canada in 2018. I have 2 years hands-on experience in Python. I am a native speaker of Turkish, and fluent in English (IELTS Academic 7.5/9).

## PROFICIENCY:

Python | C++ | Matlab | PyTorch | Keras | Tensorflow | Linux | CUDA cudnn
numpy | scikit-image | h5py/HDF5 | Git | GitHub | BitBucket | LaTex

## EDUCATION:

**MASc. Electrical and Computer Engineering,** University of Ottawa, Canada          Sep 2015-Jun 2018

- ❖ Thesis title: Image Processing Methods for Myocardial Scar Analysis from 3D Late-Gadolinium Enhanced Cardiac Magnetic Resonance Images.
- ❖ Courses: Biomedical Image Processing, Medical Imaging, Pattern Recognition and Experimental Design, Biomedical Engineering, and Optimization in Engineering Applications.

**BSc. Computer Engineering,** Kirikkale University, Turkey          Sep 2009-Jun 2013

- ❖ 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, New Jersey, USA          Mar 2018-Current

- ❖ Conducted deep learning research to detect the calcified plaques in coronary arteries from 3D CCTA images of approximately 700 patients.
- ❖ 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 deep learning research teams of over 100 people.

**Web-Developer and Database Manager,** Kirikkale University Hospital, Turkey          Sep 2012-Jun 2013

- ❖ Developed hospital website using PHP, HTML, and SQL on Oracle database.          (1-Year Part-time)
- ❖ Developed a novel encryption algorithm to encounter attacks to the database.

**Software Engineer Intern,** JeoIT, Ankara University TechnoCity, Turkey          Jul-Aug 2012

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

**Software Developer Intern,** Turkish Telecommunication Company, Ankara, Turkey          Jul-Aug 2011

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

## 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.

## EXTRACURRICULAR ACTIVITY:

- ❖ Certificated Cisco CCNA Discovery Network Administrator, 120 hour in-class training in 2012.
- ❖ Guest Lecturer for Engineering Mini Courses Program (EMCP). Taught image processing course at Carleton University, Canada in May 2017.
- ❖ Competed at 3Minute Thesis Competition at the University of Ottawa, Canada in April 2017. Video.
- ❖ 2nd Place, Robotic Challenge, Bilkent University Robotic Days in Ankara, Turkey in May 2010.

I love being active and biking. I have amateur drawings.

GitHub: fatmausta | LinkedIn: fatmausta