Fatma Usta

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Eligible to work in Canada
GitHub: fatmausta / LinkedIn: fatmausta

INTRO:

I am currently developing deep learning algorithms with Siemens Healthineers in the USA. I earned my Master's degree in Electrical and Computer Engineering in Canada in 2018. I have 2-year hands-on experience with Python. I am a native speaker of Turkish, and very fluent in English.

PROFICIENCY:

Python | PyTorch | Keras | Tensorflow | Matlab | C++ | CUDA

EXPERIENCE:

Deep Learning Developer   Mar 2018-Current

Siemens Healthineers, Princeton, New Jersey, USA
- ❖ Hands-on experience with deep learning in Python using PyTorch, Keras and (native) Tensorflow.
- ❖ Practical experience in time-series data for calcified plaque detection using CNN+LSTM models.
- ❖ Working experience in training with large datasets on high-speed GPU Clusters in Linux Environment.
- ❖ Experience working in collaboration with deep learning research teams.

Teaching Assistantship   Sep 2017-Dec 2017

University of Ottawa, Ottawa, Ontario, Canada
- ❖ Taught and guided over 200 undergraduate students during laboratory sessions for the course "Introduction to Software Engineering".
- ❖ Taught Git/GitHub, Java, NoSQL, and Android App Development with Firebase Database.

Web-Developer and Database Manager   Sep 2012-Jun 2013

Kirikkale University Research and Training Hospital, Kirikkale, Turkey   (1-Year Part-time)
- ❖ Redesigned the hospital website using PHP, HTML, and SQL on Oracle database.
- ❖ Strengthen the encryption algorithm to encounter the frequent injection attacks to the database.

Software Engineer Summer Intern   Jul-Aug 2012

JeoIT, Microsoft Partner Company, Ankara University TechnoCity, Turkey
- ❖ Scripted a database migration interface to move bug reports to a new program using SQL and C#.
- ❖ Experienced with WCF Web Services, ASP.Net, C#, JQuery, MSSQL, and PL/SQL.

IT Support Engineer   Sep 2011-Jun 2012

Kirikkale University Library, Computer Support Specialist, Turkey   (1-Year Part-time)
- ❖ Maintained and supported of library computers.
- ❖ Provided IT support to library employee and prepared IT training materials.

EDUCATION:

M.A.Sc. Electrical & Computer Engineering, University of Ottawa, Canada (Full Scholarship)   Sep 2015-Jun 2018

- ❖ Developed deep learning models for semantic image segmentation for 34 3D LGE-MR images using Python, Matlab and C++.
- ❖ Thesis title: Image Processing Methods for Myocardial Scar Analysis from 3D Late-Gadolinium Enhanced Cardiac Magnetic Resonance Images.

B.Sc. 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.
- ❖ Excelled at scripting with C, C++ and C# for many desktop applications and database systems.

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 Medical Imaging, 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 Medical Imaging, Houston, TX.

SKILLS:

Deep Learning and Image Analysis

- ❖ Solid machine learning and medical image analysis background with Python and Matlab.
- ❖ Python, PyTorch, Keras, Tensorflow, Matlab, C++, numpy and scikit-image, h5py/HDF5 and CUDA cudnn
- ❖ Dicom, Nifty, Meta Images, and binary files

Manual Image Annotating:

- ❖ Highly experienced with manual scar segmentation and myocardium registration from over 35 3D images.
- ❖ Excellent understanding of calcified plaque detection on 3D CCTA images of over 600 patients.

Academic Writing

- ❖ Academic English, IELTS Academic 7.5/9, Academic Writing.
- ❖ LaTex for technical paper writing.

Other Proficiency

- ❖ Certificated Cisco CCNA Discovery Network Administrator, 120 hour in-class training in 2012.
- ❖ Git, Github and bitBucket
- ❖ Advanced Data Structures, Algorithm Design

EXTRACURRICULAR ACTIVITY:

- ❖ Guest Lecturer for Engineering Mini Courses Program (EMCP). Taught in an image processing course to over 20 grade-8 students, Carleton University, On, Canada.   May 2017

- ❖ 3Minute Thesis Competition, University of Ottawa, Ottawa, Canada. Video Link.   April 2017

- ❖ 2nd Place, Robotic Challenge, Bilkent University Robotic Days, Ankara, Turkey.   May 2010

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