Elisabeta MARINOIU

PERSONAL DATA

PLACE AND DATE OF BIRTH: Bucharest, Romania | 28 January 1988
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WORK EXPERIENCE

Current
SEP 2012

Research Assistant/PhD Student at INSTITUTE OF MATHEMATICS OF THE ROMANIAN ACADEMY, Bucharest

My main area of research is automated human understanding from monocular images: 2d/3d human pose and shape reconstruction as well as human pose perception. My responsibilities included:

- Conducting a study in order to understand how humans perceive a 3d pose when presented with a single 2d image. The results were incorporated in automatic pose estimation algorithms from monocular images that I also developed.
- Acquiring and processing videos of children with autism undertaking robot-assisted therapy. Using the acquired data in order to develop algorithms that are able to recognize their actions and emotions only from RGB data.
- 3D pose and shape modeling of multiple people from monocular images and videos.

During my PhD thesis I acquired experience in using techniques such as: deep neural networks and recurrent neural networks, numerical optimization, 3d geometry and modelling, standard classification and regression methods.

APR-AUG 2012

Software Developer at MIND TREAT STUDIOS, Bucharest

Project-based collaboration which involved constructing a 3d avatar world which interacted with the real world by using the Microsoft Kinect device. The project also involved smartphone interaction (Android and iPhone) by moving different 3d objects according to the movement of the phone. I was responsible for the following tasks which were developed in a team of 2 persons:

- Building a C# library for gesture recognition which used Microsoft Kinect SDK.
- Positioning of the 3D objects on the avatar model with respect to the skeleton data received from the Kinect.
- Detecting the hand which is moving the phone.

FEB-JUNE 2012

Teaching Assistant at UNIVERSITY OF BUCHAREST

I taught Object Oriented Programming (C++) to first year students at the Faculty of Mathematics and Computer Science with a Specialization in Computer Science.

SEP-DEC 2011

Research Assistant at BIOINFORMATICS INSTITUTE A*STAR, Singapore

The main task was to build a C++ library for gesture recognition using Microsoft Kinect device. This involved firstly defining intuitive hand gestures to be used for image manipulation (e.g., rotation, translation) and gathering training data. The prediction model constructed was based on Support Vectors Machine and the additional libraries used were: OpenNi, OpenGl, OpenCv, LibSVM. The project was performed in team of 2 people.

JUN-SEP 2011

Project Intern at ASTRAZENECA, Manchester

My responsibilities involved analyzing time-dependant data from a clinical trial in order to build a model that will be able to predict when and if patient will experience a particular adverse event. I experimented with applying feature selection, clustering and machine learning techniques for identifying which biomarkers are important within different subgroups of patients. The programming language used was Matlab.

Education

Sep 2011	Master of Science in Advanced Computer Science - Artificial Intelligence, **The University of Manchester** Honors: *Distinction*
July 2010	Undergraduate Degree in Computer Science **University of Bucharest** GPA: 9.73/10.00

Publications

A. Zanfir, E. Marinoiu, M. Zanfir, A.P. Popa and C. Sminchisescu. Deep Network for the Integrated 3D Sensing of Multiple People in Natural Images. In NIPS 2018, *Montreal, Canada*

E. Marinoiu, M. Zanfir, V.Olaru and C. Sminchisescu. 3D Human Sensing, Action and Emotion Recognition in Robot Assisted Therapy of Children with Autism. In CVPR 2018, *Salt Lake City, USA*

A. Zanfir, E. Marinoiu and C. Sminchisescu. Monocular 3D Pose and Shape Estimation of Multiple People in Natural Scenes The Importance of Multiple Scene Constraints. In CVPR 2018, *Salt Lake City, USA*

M. Zanfir, E. Marinoiu and C. Sminchisescu. Spatio-Temporal Attention Models for Grounded Video Captioning In ACCV 2016, *Taipei, Taiwan*

E. Marinoiu, D. Papava and C. Sminchisescu. Pictorial Human Spaces: A Computational Study on the Human Perception of 3D Articulated Poses. In IJCV 2016

E. Marinoiu, D. Papava and C. Sminchisescu. Pictorial Human Spaces: How Well do Humans Perceive a 3D Articulated Pose? In ICCV 2013, *Sydney, Australia*

Technology Skills

Matlab, Python, C++, Vision Libraries (SciPy, NumPy, OpenCV, Caffe)

12.10.2018

LISTĂ DE PUBLICAȚII - ELISABETA MARINOIU

- A. Zanfir, E. Marinoiu, M. Zanfir, A.-I. Popa and C. Sminchisescu. Deep Network for the Integrated 3D Sensing of Multiple People in Natural Images. In NIPS 2018, *Montreal, Canada*
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