# igorperic

## computer vision and robotics master degree student



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## residence

Glavicice 212 Bijeljina, 76318 Bosnia and Herzegovina

## languages

serbian mother tongue english fluency spanish elementary

## programming ♥ C#, C++ C, Matlab, Python

### personal born in 1991 Bosnian nationality

## education

2013–2015 Masters in Computer Vision and Robotics

University of Burgundy [Le Creusot, France]

University of Girona [Girona, Spain]

Heriot Watt University [Edinburgh, United Kingdom]

120 ECTS Erusmus Mundus Master degree with focus on image processing techniques, computer vision, applied mathematics and linear algebra, autonomous and underwater robotics, realtime imaging and control systems, medical imaging.

2009-2013 Bachelor of Information Technology and Engineering

Slobomir P University, Bosnia and Herzegovina

240 ECTS for courses in software engineering, data structures and algorithms, networking systems and communications, operating system design and architecture, applied electronics, microprocessors and embedded systems, information security and cryptography.

# **experience**

2014–Now Braingaze

Master thesis project

Developing a neural network classifier for detecting presence and type of ADHD disorder in patients, based on different behavior and eye tracking data. Testing performance of state of the art methods and proposing novel combined methods using sparse distributed representations and biologically inspired spiking neural networks.

2014-2014 CIRS Underwater Vision and Robotics Lab

Summer internship

Mainly dealing with sensory data processing, autonomous mapping and motion planning algorithms and detection of anomalies using underwater camera image processing (OpenCV). Main goal was developing autonomous system for solving mapping and localization tasks in both C++ and Python, using third party ROS libraries (octomap for mapping, cola2 AUV control architecture, etc).

2010–Now Microsoft

Bijeljina, Bosnia and Herzegovina

Barcelona, Spain

Girona, Spain

Microsoft Student Partner

Promotion of Microsoft development technologies through public speaking, event organization and attendance and participation in different types of competitions. Earned plenty of software development skills on .NET platform and gained a lot of experience in project-oriented development, teamwork and software lifecycle management.

2012–2013 Tracking in Motion

London, United Kingdom

Software developer

Development of ball tracking solutions, which include motion detection, ball path prediction, camera calibration and 3D reconstruction. Most of the time researching different image processing techniques to find the best approach to perform ball tracking in the most efficient, robust and accurate way. Working with multiple high-speed GigE industrial cameras.

## awards

#### 2014 Verified certificate for course in Neural Dynamics

EPFL, Switzerland

Awarded verified certificate for attending and successfully completing course on edX.com online learning platform in the field of Neuronal Dynamics. Course was taught by Wulfram Gerstner from EPFL, Switzerland. Course content was focused on modeling computational aspects of neural activity in the brain by considering biophysical phenomenons such as spike formation, neural plasticity, structure of synapses, dendrites and soma, etc.

www.edx.org/course/neuronal-dynamics-computational-epflx-bio465-1x

#### 2013 1st place in robotics competition

University of Girona, Spain

Participation as a member of a team from University of Girona in underwater autonomous robotics competition "euRathlon 2014" in La Spezia, Italy. Out of 5 disciplines our team competed in, my team won four 1st prizes and one 2nd prize

www.eurathlon.eu

#### 2013 **Postgraduate Scholarship**

University of Burgundy, France

Awarded full scholarship for attending two-year Erasmus Mundus Master degree in Computer Vision and Robotics (VIBOT) on universities in France, Spain and United Kingdom.

www.vibot.org

#### 2011–2013 Microsoft Imagine Cup Wordwide Finalist

New York, Sydney, Saint Petersburg

Wordwide finals representative three successive years during bachelor degree on international student technology competition organized by Microsoft. Built GPU accelerated water flow simulator, remotely controlled non-intrusive smart house system and Kinect powered tactile feedback device for helping blind people move in indoor environments.

www.imaginecup.com

#### 2008-2009

**National champion in Algorithms and data structures**Bijeljina, Bosnia and Herzegovina

Won the national competition of algorithms and data structures three years in a
row. Participated in two International Olympiads of Informatics. Gained experience in algorithmic complexity estimation, optimization techniques and data
structure usage for formally defined input/output and interactive tasks.

www.ioinformatics.org

# communication skills

#### 2015 **Oral Presentation**

Microsoft .NET User Group, Bosnia and Herzegovina

Delivered a talk about general concepts of artificial intelligence research and recent trends in academic community. I've shown usage of explained principles in products currently on market (Microsoft Kinect, Leap Motion, Microsoft HoloLens, etc). I gave an overview of current initiatives of whole brain simulation, challenges involved and philosophical implications of creating true AI.

#### 2012 **Oral Presentation**

Microsoft Regional Conferences, Bosnia and Herzegovina

Presented modern UI interaction using Microsoft Kinect, Mindwave and Leap Motion to developers and IT experts on regional Microsoft conference MS Netwok 2012. Presented Kinect SDK platform to developers and IT experts on regional Microsoft conference MS Netwok 2011.

#### 2011 **Presentation and workshop**

Microsoft .NET User Group, Bosnia and Herzegovina

Presented project life cycle for participation in Microsoft Imagine Cup 2012 worldwide finals.

# interests

**professional:** computational neuroscience, artificial intelligence, high-performance computing, distributed computing, knowledge representation, learning algorithms, software engineering **personal:** tae kwon-do, music, table-tennis

# **publications**

2013	Contextually dependent visual representation of unknown object in real time XII International Scientific Symposium INFOTEH - JAHORINA 2013
2013	<b>Description of electro-mechanical camera carrier for tracking moving objects</b> XII International Scientific Symposium INFOTEH - JAHORINA 2013
2012	<b>Solution concept of system for helping people with partial or complete blindness</b> XI International Scientific Symposium INFOTEH - JAHORINA 2012

## recommendations

2014	Mathini Sellathurai (m.sellathurai@hw.ac.uk)  Heriot-Watt University, UK  Professor of Advanced Image Applyaic acures on Heriot Wett University in Ed
	Professor of Advanced Image Analysis course on Heriot-Watt University in Ed- inburgh, United Kingdom
2013	<b>Yohan Fougerolle (yohan.fougerolle@u-bourgogne.fr)</b> University of Burgundy, France Professor of Software Engineering course on University of Burgundy in Le Creusot, France
2012	<b>Enis Sahinovic (eniss@microsoft.com)</b> Microsoft, Bosnia and Herzegovina  Development Platform Evangelist and Academic Lead for Microsoft Bosnia and  Herzegovina
2012	<b>Djordje Babic (dj.babic@spu.ba)</b> Slobomir P University, Bosnia and Herzegovina Dean of Faculty of Information Technology on Slobomir P University in Bijeljina, Bosnia and Herzegovina. Professor of Communication and Networking, Multimedia systems and Computer Security and Cryptography courses on Slobomir P University
2012	<b>Dragan Urosevic (draganu@turing.mi.sanu.ac.rs)</b> Slobomir P University, Bosnia Professor of Numerical methods, Basics of programming and Programming languages courses on Slobomir P University in Bijeljina, Bosnia and Herzegovina. Member of Serbian Academy of Art and Sciences in Belgrade, Serbia