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<b>Work Experience</b>	<b>STI (Science, Technology, Innovation) Consultant</b> <a href="http://dmoldovan.com">dmoldovan.com</a>	<b>04.2020 – present</b>
	<ul style="list-style-type: none"><li>In an increasingly dominating global economy, the need of harnessing science, technology and innovation has become quite evident. As an STI Consultant I am providing support to business enterprises looking for ways to innovate their products, services and processes in the industrial and technical domains.</li></ul>	
	<b>Head of Emerging Delivery Projects</b> <b>NTT DATA Romania</b>	<b>01.2019 – 03.2020</b>
	<ul style="list-style-type: none"><li>Managed the process of productization of a 3D based People Counting application - a <b>modular, highly scalable SaaS</b> solution for Crowd Analysis built on the concept that Surveillance and Privacy can co-exist.</li></ul>	
	<b>Head of R&amp;D and Innovation Centre,</b> <b>NTT DATA Romania</b>	<b>02.2017 – 12.2018</b>
	<ul style="list-style-type: none"><li>Founded the R&amp;D department that consisted of 20 engineers, data scientists and presales managers that (1) contributed to business creation as experts of <b>innovative technologies</b>, (2) supported the R&amp;D activities in NTT / NTT DATA HQ and (3) built technological differentiators related to Innovation.</li></ul>	
	Some representative projects that were initiated and completed during this period include: (1) <b>A Suite of Crowd Analysis Solutions</b> (People Counting, Queue Length Detection, Semantic Classification of Human Activities) that truly respected the privacy by analyzing only captured 3D point clouds. (2) <b>AI based Object Detection and Classification</b> in an industrial setup (2D image based). (3) <b>Mobile and Web-based applications for interfacing Big Data Analytics</b> deployed for clients from the Healthcare sector. (4) <b>VR System for a Realistic (3D + Audio)</b> and Interactive Workplace Safety Training Tool. (5) <b>Smart Robotic System</b> that employed 2D Vision and Robot Arm Actuation to implement Automatic Touch-Screen Devices testing. (6) <b>Autonomous Drones for Smart Maintenance Solutions</b> (with onboard 3D based Navigation and Obstacle Detection as well as 2D based Object Recognition).	
	<b>Senior Research Scientist,</b> <b>FH Technikum, Vienna</b>	<b>01.2016 – 02.2017</b>
	<ul style="list-style-type: none"><li>Conducting applied research in the field of <b>Collaborative Robotics</b> combined with teaching activities in the field of <b>Mobile and Service Robotics</b>. Built a consortium of academic and industrial EU partners that submitted a proposal to EU call: <b>Effective Industrial Human-Robot Collaboration</b>.</li></ul>	
	<b>Senior Project Assistant,</b> <b>Technical University of Vienna</b>	<b>10.2015 – 02.2016</b>
	<ul style="list-style-type: none"><li>Coordinating a team of Master students for implementing an automatic <b>image based reading of measurement instruments</b> (pressure gauges, water level indicator) for autonomous surface robot adapted to oil &amp; gas sites.</li></ul>	
	<b>Project Researcher Specialist</b> <b>AIT (Austrian Institute of Technology), Vienna, Austria</b>	<b>02.2013 – 09.2015</b>

- Responsible for research projects in the intelligent vision systems area. The overall goal was to transform the ever increasing amount of raw visual data into valuable information for future secure environments.
- Designed and implemented an **intrusion detection** system based on 3D vision (1). Involved in industrial applications that required precise **volumetric measurements** by using depth sensors (2). Analysed the feasibility of flying an **autonomous Unmanned Aerial Vehicle** based on on-board camera feed and satellite imagery of the surveyed area (3).

**Visual Computing Consultant**

**09.2012 – 01.2013**

**Vitheia Norge, Oslo, Norway**

- Analysed the feasibility of a **fall detection** system based on Kinect sensor. This project was undertaken in collaboration with Norwegian partners (both academic and industrial) in a wider context of home environment monitoring that would help reduce healthcare costs.

**Postdoctoral Research Scientist**

**06.2012 – 09.2012**

**Dept. of Adaptive Machine Systems, Osaka University, Japan**

- Investigated automatic detection of **comfortable level of illumination** by using expressive facial expressions generated in response to changes in the visual environment. The research topic belongs to a **Smart-House** project undertaken in collaboration with **Daiwa House** (industrial partner).

**Expert Research Scientist**

**04.2006 - 05.2012**

**NICT (National Institute of Information and Communications Technology), Kyoto, Japan**

- Investigated the maximum displayable **angular resolutions** of a planar 3-D object displayed by a glasses-free tabletop 3-D display that is using a conic-shaped optical device and an array of projectors.
- Performed automatic **full 3D reconstruction** of real objects from range views.

**Research Scientist**

**04.2002 – 03.2006**

**Wakayama University and ATR, Kyoto, Japan**

- Academic research investigating 3D map reconstruction of an unknown environment by using an **omnidirectional camera**. The process involved generating a virtual camera with a cylindrical image plane.

**Lecturer**

**10.1998 – 03.1999**

**Petru Maior University, Romania**

- Held lectures and seminars for **Digital Electronics** course. Advised undergraduate students on Diploma project.

**Deputy Editor in Chief**

**06.1996 – 03.1999**

**Computer Press Agora, Romania**

- Responsible for the adaptation into Romanian language of articles from **BYTE** magazine corresponding to networking technologies and artificial intelligence sections.

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<b>Education</b>	• <b>PhD in Computers and Information Technology</b> Technical University of Cluj-Napoca, <b>Romania</b>	<b>10.2009 – 03.2012</b>
	• <b>Doctoral studies in Computer Vision</b> Faculty of Systems Engineering, Wakayama University, <b>Japan</b>	<b>04.2002 – 03.2005</b>
	• <b>MSc in Opto-Mechatronics</b> Faculty of Systems Engineering, Wakayama University, <b>Japan</b>	<b>04.2000 – 03.2002</b>
	• <b>BSc in Electrical Engineering</b> Technical University of Cluj-Napoca, <b>Romania</b>	<b>10.1990 – 06.1995</b>

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<b>Licenses &amp; Certifications</b>	• <b>Entrepreneurship: Developing the Opportunity</b> Coursera / Wharton, University of Pennsylvania	<b>05.2020</b>
	• <b>Fundamentals of GIS</b> Coursera / University of California, Davis	<b>04.2020</b>

- **GIS Data Formats, Design and Quality** 05.2020  
Coursera / University of California, Davis
- **Geospatial and Environmental Analysis** 06.2020  
Coursera / University of California, Davis

**Journal Publications**

Daniel Moldovan, Takahiro Miyashita and Hiroshi Ishiguro, **A Method for Reconstructing Structure from Omnidirectional View Sequence without Feature Matching** in *IPSSJ Journal of CVIM*, July, 2003.

**Patent**

Daniel Moldovan, Sumio Yano, Yoshida Shunsuke, Naomi Inoue, **Method and apparatus for registering 3D range data**, submitted to *Japan Patent Office*, Registration Number: 2008-280774.

**Conference Publications (selection)**

- Andrei Lucian, Andreea Sandu, Radu Orghidan, Daniel Moldovan, **Human Legs Detection from Depth Sensing**, *IEEE International Conference on Automation, Quality and Testing, Robotics, Cluj-Napoca, Romania, 24 – 26 May 2018*.
- Daniel Moldovan, Oliver Zendel and Christian Zinner, **Virtual 3D Shield for Asset Protection**, *The 4<sup>th</sup> IEEE International Conference on Consumer Electronics, Berlin, Germany, Sept. 7-10, 2014*.
- Daniel Moldovan, Shunsuke Yoshida, Masahiro Kawakita and Hiroshi Ando, **Analysis of resolution limitation of glasses-free 3-D tabletop display**, *IS&T/SPIE Electronic Imaging 2011, Stereoscopic Displays and Applications XXII (Conference 7863), San Francisco, U.S.A, 23 - 27 January 2011*.
- Daniel Moldovan, Roberto Lopez-Gulliver, Sumio Yano and Hiroshi Ando, **Online System for 3D Model Reconstruction and Visualization on gCubik Auto-Stereoscopic Display**, *Proceedings of 3DSA, Tokyo, Japan, May 19th-21st, 2010*.
- Daniel Moldovan, Sumio Yano, Naomi Inoue, **Automatic Registration of Multiple Range Views based on Feature Matching and Feature-Depth Correspondences**, *Proceedings of ICCP 2009, Cluj-Napoca, Romania, August 27th-29th, 2009*.

**Volunteering**

**Presentation about Romanian Culture** 07.1999 – 01.2007  
**Tsu-shi / Wakayama-shi / Osaka / Nara / Kyoto, Japan**

- Over a period of 8 years I participated in various activities in which I introduced Romanian culture (history, traditions, language, food and folk dance) to a large variety of audiences: schoolchildren, university students international meetings, cultural events.

**Robotics Clubs**  
**Vienna, Austria**

02.2016 – 12.2016

- Organized Robotics clubs at two International schools in Vienna (VIS and Amadeus) in which I trained schoolchildren in building mobile robots that could navigate an environment by avoiding physical obstacles.