Curriculum Vitae

PERSONAL INFORMATION

Marc Masana Castrillo

Lepant, 389 esc.1 3-3, 08025 Barcelona (Spain)

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mmasana@cvc.uab.es

https://mmasana.github.io/

Sex Male | Date of birth 07/03/1988 | Nationality Spanish

APPLYING FOR

Postdoc position

WORK EXPERIENCE

Des 2015 - now

PhD student

Computer Vision Center (CVC), O-building, Campus UAB, 08193 Bellaterra (Barcelona)
Tel.: +34 93 581 18 28 - http://www.cvc.uab.cat

- Research and server administrator at the LAMP group
- Supervisors: Joost van de Weijer, Andrew D. Bagdanov

Computer Vision

Mar 2012 - Aug 2015

Support researcher

Computer Vision Center (CVC), O-building, Campus UAB, 08193 Bellaterra (Barcelona)
Tel.: +34 93 581 18 28 - http://www.cvc.uab.cat

- Project managing
- Research and programming

Computer Vision

Feb 2009 - Feb 2012

Scholarship holder

Institute of Law and Technology (IDT), B-building, Campus UAB, 08193 Bellaterra (Barcelona).
Tel.: +34 93 581 22 35 - http://idt.uab.es

- Database management
- Webpage management
- Video transcription

Law and Artificial Intelligence

EDUCATION AND TRAINING

Oct 2014 - Sep 2015

Master in Computer Vision

Joint program between: UAB - Universitat Autònoma de Barcelona, UOC - Universitat Oberta de Catalunya, UPC - Universitat Politècnica de Catalunya, UPF - Universitat Pompeu Fabra

- Website: http://pagines.uab.cat/mcv/
- Best master thesis of the 2015 promotion, scoring the maximum grade possible (10/10).
- Awarded a distinction for finishing in the Top5 best students of the 2015 promotion.

Sep 2006 – Sep 2014

Double degree studies in:

Engineer in Computer Studies (Bachelor + Master)
Bachelor of Science in Mathematics

UAB - Universitat Autònoma de Barcelona

- Master level courses such as Bioinformatics, Computer Vision, Artificial Intelligence, Differential Equations applied to Biology, Numerical Analysis and Financial Optimization.
- 5 month Erasmus stay from Sep 2013 to Jan 2014 at LIU - Linköpings Universitet (Sweden).

PERSONAL SKILLS

Mother tongue(s) Catalan and Spanish

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C1	C1	C1	C1	C1
	CAE: Certificate in Advanced English - Cambridge, C1 Europe GESE: Graded Examinations in Spoken English (Grade 10) - Trinity College, C1 Europe				
Swedish	A1	A1	A1	A1	A1
	Swedish for Foreign Students - Linköpings universitet, A1 Europe				
German	A1	A1	A1	A1	A1
	Studied German at school but never took any official exam				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Communication skills

- experience as a teacher/tutor for high school, university and adult students (2006 – 2012),
- experience as a teacher for the Master in Computer Vision at UAB (2016 - 2018)
- participation on the LAMP weekly reading group presentations and discussions,
- oral and poster presentations in multiple international conferences and seminars.

Computer skills

- Python, C++, Java,
- numerical computing languages (MatLab, Octave, Maple),
- web related languages (PHP, HTML, CSS),
- LaTeX, Microsoft Office tools and other open-source options,
- Windows and GNU/Linux based operating systems,
- Git version control system.

Other skills / jobs

- Sociedad Estatal de Correos y Telegrafos (national posting service of Spain) (2010),
- working and volunteering on events for kids (2010),
- created and maintained the LAMP website (2015 - 2017),
- helped build and maintain GPU clusters and servers for the LAMP research group (2016 -).

ADDITIONAL INFORMATION

Publications

Publication
Marc Masana, Bartlomiej Twardowski, Joost van de Weijer. "**On Class Orderings for Incremental Learning**", under review 2020.

Publication
Marc Masana, Tinne Tuytelaars, Joost van de Weijer. "**Ternary Feature Masks: continual learning without any forgetting.**", under review 2020.

Publication
Matthias De Lange, Rahaf Aljundi, Marc Masana, Sarah Parisot, Xu Jia, Ales Leonardis, Gregory Slabaugh, Tinne Tuytelaars. "**Continual Learning: A comparative study on how to defy forgetting in classification tasks.**", under review 2020.

Publication
Corina Kräuter, Ursula Reiter, Clemens Reiter, Volha Nizhnikava, Marc Masana, Albrecht Schmidt, Michael Fuchsjäger, Rudolf Stollberger, Gert Reiter. "**Automated mitral valve vortex ring extraction from 4D flow MRI.**", Magnetic Resonance in Medicine (MRM) 2020.

Publication
Aymen Azaza, Joost van de Weijer, Ali Douik, Javad Zolfaghari, Marc Masana. "**Saliency from High-Level Semantic Image Features.**", Computer Vision and Image Understanding (CVIU) 2020.

Publication
Corina Kräuter, Ursula Reiter, Albrecht Schmidt, Marc Masana, Rudolf Stollberger, Michael Fuchsjäger, Gert Reiter. "**Objective extraction of the temporal evolution of the mitral valve vortex ring from 4D flow MRI.**", International Society for Magnetic Resonance in Medicine (ISMRM) 2019.

Publications

Publication

Jorge Bernal, Aymeric Histace, Marc Masana, Quentin Angermann, Cristina Sánchez-Montes, Cristina Rodríguez de Miguel, Maroua Hammami, Ana García-Rodríguez, Henry Córdova, Olivier Romain, Gloria Fernández-Esparrach, Xavier Dray, F Javier Sánchez. "**GTCreator: a flexible annotation tool for image-based datasets.**", International Journal of Computer Assisted Radiology and Surgery (IJCARS) 2018.

Publication

Aymen Azaza, Joost van de Weijer, Ali Douik, Marc Masana. "**Context Proposals for Saliency Detection.**", Computer Vision and Image Understanding (CVIU) 2018.

Publication

Marc Masana, Idoia Ruiz, Joan Serrat, Joost Van de Weijer, Antonio M Lopez. "**Metric Learning for Novelty and Anomaly Detection."**, British Machine Vision Conference (BMVC) 2018.

Publication

Jorge Bernal, Aymeric Histace, Marc Masana, Quentin Angermann, Cristina Sánchez-Montes, Cristina Rodríguez de Miguel, Maroua Hammami, Ana García-Rodríguez, Henry Córdova, Olivier Romain, Gloria Fernández-Esparrach, Xavier Dray, Francisco Javier Sánchez. "**Polyp Detection Benchmark in Colonoscopy Videos using GTCreator: a Flexible Annotation Tool for Image Datasets.**", International Journal of Computer Assisted Radiology and Surgery (IJCARS) 2018.

Publication

Xialei Liu, Marc Masana, Luis Herranz, Joost Van de Weijer, Antonio M Lopez, Andrew D. Bagdanov. "**Rotate your Networks: Better Weight Consolidation and Less Catastrophic Forgetting.**", International Conference on Pattern Recognition (ICPR) 2018.

Publication

Marc Masana, Joost van de Weijer, Luis Herranz, Andrew D. Bagdanov, Jose M. Alvarez. "**Domain-adaptive Deep Network Compression.**", International Conference on Computer Vision (ICCV) 2017.

Publication

Ozan Caglayan, Walid Aransa, Adrien Bardet, Mercedes García-Martínez, Fethi Bougares, Loïc Barrault, Marc Masana, Luis Herranz, Joost van de Weijer. "**LIUM-CVC submissions for WMT17 multimodal translation task.**", publication accepted at WMT 2017 after winning the Multimodal Machine Translation challenge.

Publication

Esteve Cervantes, Long Long Yu, Andrew D. Bagdanov, Marc Masana, Joost van de Weijer. "**Hierarchical Part Detection with Deep Neural Networks.**", International Conference on Image Processing (ICIP) 2016.

Publication

Ozan Caglayan, Walid Aransa, Yaxing Wang, Marc Masana, Mercedes García-Martínez, Fethi Bougares, Loïc Barrault, Joost Van de Weijer. "**Does multimodality help human and machine for translation and image captioning?**", publication accepted at WMT 2016 after winning the Multimodal Machine Translation challenge.

Publication

Marc Masana, Joost van de Weijer, Andrew D. Bagdanov. "**On-the-fly Network Pruning for Object Detection.**", International Conference in Learning Representations (ICLR) 2016.

Publication

Joost van de Weijer, Fahad Khan, Marc Masana. "**Interactive Visual and Semantic Image Retrieval.**" Multimodal Interaction in Image and Video Applications. Springer Berlin Heidelberg, 2013. 31-45.

Research Projects and Knowledge Transfer Projects

Research internship

PhD stay at the KU Leuven PSI group (Belgium) doing research on LifeLong Learning under the supervision of Tinne Tuytelaars, 2019.

Project

Deep Multi-Task Learning for Object Recognition (TIN2016-79717-R)
Financing entity: MICINN, Spanish Ministry of Education and Science, Date: 2017-2019, Amount: 39kEuro, Entity of affiliation: Computer Vision Center, Principal Investigator: Joost van de Weijer/ Bogdan Raducanu.

Project

International automotive company (confidential), research and implementation of a framework including novelty/anomaly detection, data generation and lifelong learning methods, 2017-2018.

Knowledge transfer

EURECAT, assist on master thesis of Olaia Artieda "Automatic MEME discovery" about distance learning with siamese and triplet networks, 2016. (website: https://eurecat.org/)

Research Projects and Knowledge Transfer Projects

Project
Multimodal Multilingual Continuous Representation for Human Language Understanding (PCIN-2015-251)
Financing entity: MICINN, Spanish Ministry of Education and Science, Date: 2016-2018, Amount: 88kEuro, Entity of affiliation: Computer Vision Center, Principal Investigator: Joost van de Weijer. M2CR chist-era project. (website: http://www.chistera.eu/projects/m2cr)

Project
Closing the loop: bio-inspired top-down feedback for computational vision systems (TIN2013-41751-P)
Financing entity: MICINN, Spanish Ministry of Education and Science, Date: 2014-2016, Amount: 85kEuro, Entity of affiliation: Computer Vision Center, Principal Investigator: Joost van de Weijer/ Xavier Otazu.

Challenge
Laura López, Marc Masana, David Solé, Andrey Ziyatdinov. "**Accenture digital datathon.**", Business Track Award 2016, winning team out of 10.

Project
"Context-based Pruning for Scalable Object Detection", master thesis for the Master in Computer Vision, 2015. **Best master thesis award.** Starting point for PhD research on Neural Network Pruning and Compression.

Knowledge transfer
SADAKO Tehnologies, assist in the design and optimization of a computer vision pipeline, 2015. (website: http://www.sadako.es/)

Project
"Multispectral Data Acquisition and Reconstruction", bachelor thesis consisting on the implementation of accurate color measurements on mobile devices, 2014.

Project
"Discriminative Color Descriptors", adapted the code accompanying the corresponding CVPR paper for MatLab and C++, code has over 700 downloads, 2013.

Project
"Object recoloring based on intrinsic image estimation", MatLab demo code to accompany ICCV paper which allows for physics-based recoloring of object in images, 2013.

Knowledge transfer
"Interactive Image Retrieval" demo at the MIPRCV Industry Day at CONSOLIDER INGENIO program, 2012.

Project
"Interactive Image Retrieval", developed code for the presentation and browsing of the CVC VOC PASCAL challenge on image classification, 2012.

Project
"Cell phones and conflict zones: How souktel uses SMS technology to empower and aid in conflict-affected communities", the authors warmly thank Marc Masana from the UAB Institute of Law and Technology for his help in drafting parts of this chapter, 2011.

Project
"Llibre Blanc de la mediació a Catalunya", video transcription, webpage and database management, 2009.

Talks, Seminars and Lectures

Invited talk
"Avoiding Catastrophic Forgetting when Learning a Sequence of Tasks", by Marc Masana. Northwestern Polytechnical University, Xi'an (China), 2019.

Invited talk
"Two talks on Deep Networks", by Marc Masana. KU Leuven PSI group (Belgium), 2018.

Lecture
"Deep Learning Frameworks.", by Marc Masana. COST Action. Hands-on session (code), 2018.

Lecture
"Deep Learning Frameworks.", by Marc Masana. Special focus on Tensorflow, Tensorboard and PyTorch. Master in Computer Vision M5, 2018.

Seminar
"Lifelong Learning Seminar", by Joan Serrà, Xialei Liu and Marc Masana. CVC Seminars, 2018.

Lecture
"Deep Learning Frameworks.", by Joan Serrat and Marc Masana. Special focus on Caffe and Matconvnet. Master in Computer Vision M5, 2017.

Seminar
"Hands-on Deep Learning", by German Ros, Joost van de Weijer, Marc Masana and Yaxing Wang, 2016. (website: http://germanros.net/online-courses/hands-on-dl/)

Courses

Course
"Convolutional Neural Networks for Visual Recognition", Stanford University course CS231n (online version, not evaluated), 2016.

Course
"Learning How To Learn", Univeristy of California in collaboration with Coursera, 2016.

Course
"Intro to Parallel Programming: using CUDA to harness the power of GPUs", Udacity online university, 2015.

Course
"Introduction to computer science: building a search engine", accomplished with high distinction, Udacity online university, 2012.

Course
"Webpage design", summer courses at Universitat Autònoma de Barcelona, 2008.

Reviewer

Journals
Neural Computation, IEEE Transactions in Multimedia.

Conferences
CVPR, WACV, ICME, ACCV, GIANA, VISAPP.