

David Millán Escrivá

Actual Job Position: Technical leader in research department.

Marital Status: Married

Nationality: Spain

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Education

2016	Master Degree innovation management, investigation and development.	Spain
2007 - 2014	Universitat Politècnica de Valencia Master Degree Pattern recognition, Artificial intelligence and Computer graphics <i>Thesis: Augmented reality in industry, video see through vs optical see through.</i>	Spain
1999 - 2004	Universitat Politècnica de Valencia IT specialized in computer vision <i>Graduated project: Computer-Human interaction with a projector and laser pointer. A Computer vision tool. Published in IPO Spain congress 2004</i>	Spain

Work Experience

Position: Principal researcher

Company: ITI Instituto Tecnológico de Informática

Objectives reached and responsibilities:

- Computer vision for Autmented Reality applications
- Neuromorphic vision research. Image reconstruction from Neuromorphic vision events.
- Technical leader of new MLOPs platform. Development of new platform of MLOps, management of project and teams.
- Technical leader of BigData PaaS project. Techincal decision and management of project that deploy a BigData Software in IaaS
- Technical leader of new concept of AI platform. Development of platform and decisions,

team management and development of technical reports for investments

- Technical leader of AI European project AIDA. Development and implementation of BigData analysis and decision support, team management. Collaboration with european partners. UI and deployment of results.
- Technical leader with responsibilities of technical decision of software and hardware stacks
- Agile methodology applied to developer management.
- Research and development of new Edge Computing on industrial inspection
- Machine Learning COVID19 image segmentation of breast lungs
- Pedestrian detection using DNN
- Machine Learning framework development for MLOps
- Full Stack development from user interfaces, backend and ML algorithms and CV tasks

November 2018 - Actually, Full time

Position: Chief Technology Officer

Company: Emotion Research Lab

Objectives reached and responsibilities:

- Team leader and management.
- Agile methodology applied to developer management.
- Research and development of new facial and emotion computer vision algorithms with high accuracy reaching 98%
- Eye tracking with webcam and computer vision reaching more than 95% accuracy
- Explore Deep Learning applied to emotion facial detection
- Web Services, backend and frontend developed in multiple languages like Python, Java, NodeJS, C++ and PHP
- Improve read and write to DynamoDB DataBase access exploring multiple technologies and multi-threading
- Manage Amazon Web Services infrastructure
- Robot development with odroid and AWS services
- Improve 5x speed of C++ computer vision algorithms with multi-threading and multiprocessing
- Real Time camera facial emotion detection and dashboard processing using kinesis stream technology

August 2015 - October 2018, Full time

Position: Computer vision developer and project management

Company: London Startup based company (NDA contract)

Objective reached and responsibilities:

- Online development team management.
- Computer Vision development in OpenCV in android NDK
- OCR development for mobile solution using Tesseract library and NDK
- Ferns matching in C++
- Multithreading and multi processing in C++

- Optical Flow analysis using OpenCV library
- Mobile performance in C++ and NDK
- Web Development CMS in Yii2 PHP framework
- MySQL database performance

January 2015 - June 2015, Full time

Position: Head image processing

Company: Skin analytics

Objectives reached and responsibilities:

- Computer vision and machine learning developments supervision
- Manage the image processing team
- Create image processing for skin detection and processing using OpenCV and Python
- Texture classification with SciPy, R and OpenCV python
- Apply Machine learning algorithms like ANN with MLP, SVM, KNN, Boost in different scenarios to detect dry skin. Reach 80% accuracy.
- Use tools like Weka and R for prototype and evaluation
- C++ development for Mole detection and classification
- Python with scipy and numpy for skin detection and classification
- Android camera performance with java and UI

June 2014 - January 2015, Full time

Position: Chief Technology officer (Startup)

Company: Augmate Reality Developer

Objectives reached and responsibilities:

- Develop the augmented reality company MVP
- Develop the company software architecture
- Reach 2M\$ of investors with our developed MVP and software strategy and architecture.
- Development management.
- Augmented reality and computer vision development
- OCR development with Tesseract and OpenCV
- OpenGL interface development SDK
- QR detection and tracking
- 3D object import file and visualization in OpenGL in SDK
- Wearable SDK development (Vuzix SDK)
- Web Application development for CMS
- Android application for wearable Vuzix M100
- Android UI design

June 2011 - Sep 2013, partial time

Position: Chief Technology officer

Company: Artres comunicaci3n valencia S.L.

Objectives reached and responsibilities:

- Small team management, from designer to content providers.

- Client management and negotiations.
- Hundred of websites and applications developments
- Innovate in new areas and open new business opportunities like E-Learning.
- Apache Tomcat server administration
- Apache Server administration
- Java Web Application development
- Php Web Application development
- Html5 and Css3 frontend
- Javascript, Dom and JQuery frontend development
- Mysql
- Postgres and Oracle
- E-Learning and Scorm Development

June 2004 - March 2014, full time

Technical Experience

- Computer vision and pattern recognition (More than 10 years)
- More than 10 years experience in C and more than 7 in C++
- Optical Character Recognition
- Machine Learning & MLOps
- Augmented Reality
- Augmented Reality Devices (wearable devices)
- OpenGL and Computer Graphics
- Dicom and medical libraries such ITK and IGSTK
- Language agnostic.
- Senior programming languages: C, C++, Java, Python...
- CMake
- UI/UX expert
- Project management
- Agile software development
- Scientific Software: Matlab, R, Mathematica, Octave, GnuPlot, Latex
- High experience in web technology (senior)
 - Php
 - Java/Jsp struts
 - Javascript
 - HTML5
 - CSS3
 - NodeJS
 - Angular, Vue and React
- High level on Web Server Management (Apache, Apache Tomcat, server installations...)
- DataBase as Mysql, PostgreSQL, Oracle
- Experience in Android platforms and NDK development.

- Experience in development in Linux (more than 10 years) (major distributions, ubuntu, centos, debian, slackware, ...), OSx (4 years) and windows
- E-learning - Scorm 1.2, 2004 and TinCan
- Computational linguistics

Other Skills

- Languages: Spanish (native), English (intermediate, professional)
- Teamwork and leader.
- Autodidact.
- Computer vision enthusiastic.
- A dedicated, self-motivated team player.
- I like big challenges.
- Experience with project managements and project organization.
- Computer graphics design (3d and 2d, blender, 3dStudio max, softimage, photoshop, ...)

Publications

- O. D. T. Catalá et al., "Bias Analysis on Public X-Ray Image Datasets of Pneumonia and COVID-19 Patients," in IEEE Access, vol. 9, pp. 42370-42383, 2021, doi: 10.1109/ACCESS.2021.3065456.
- O. Del-Tejo-Catalá, J. -L. Guardiola, J. Pérez, D. M. Escrivá, A. J. Perez and J. -C. Perez-Cortes, "Probabilistic Pose Estimation From Multiple Hypotheses," in IEEE Access, vol. 11, pp. 64507-64517, 2023, doi: 10.1109/ACCESS.2023.3288569.
- Escrivá, D.M., Ruiz, J.T., Carbó, P.G. et al. Computer Vision on the Edge to Reduce Network Bandwidth Consumption and Computing Resources in Multi-view 3D Industrial Inspection without Hidden Surfaces. J Sign Process Syst 95, 1079–1090 (2023). <https://doi.org/10.1007/s11265-023-01844-0>
- Patent US20220335643A1: Method for determining the orientation of a physical object in space
- Co-Author: "Mastering OpenCV 4: A comprehensive guide to building computer vision and image processing applications with C++"
- Author: "OpenCV by Example" ISBN-139781785280948
- Co-Author: "Mastering OpenCV with Practical Computer Vision Projects" ISBN-1849517827
- "Una aproximación a la integración del computador en el entorno de trabajo real" AIPO 2004

Trainings/Seminars

- Congress Poster: An approximation to merge real work environment in a computer. HCI AIPO 2004
- Computer Graphics talks about Blender and Long film “Plumiferos, aventuras voladoras”
- 2004: Game development introduction. UPV.
- 2009-2011: Game development with Blender Game Engine

Personal interests

Read and learn more about computer vision and newest technologies.

Adoring husband and father.

Like play sports: running, cycling and swimming, Trail running