



Adrià Arbués Sangüesa



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EDUCATION

POMPEU FABRA UNIVERSITY RESEARCHER

From October 2017 | Barcelona, Spain
Computer Vision and Machine Learning
Techniques applied to Basketball Video
Sequences.

AALBORG UNIVERSITY MSC IN VISION, GRAPHICS AND INTERACTIVE SYSTEMS

September 2015 - June 2017 | Aalborg,
Denmark

POMPEU FABRA UNIVERSITY BENG IN AUDIOVISUALS SYSTEMS ENGINEERING

September 2011 - July 2015 |
Barcelona, Spain

COURSEWORK

RELATED COURSES

- Advanced Image and Video Processing
- Machine Learning
- Computer Graphics Programming
- User-Experience Design
- Three Dimensional Vision
- Video and Images Encoding Systems

Distinctions:

- Image Analysis and Interpretation
- Advanced Visualization

SKILLS

PROGRAMMING

Mastered:

C++ (OpenCV) • C# • Python

Matlab • FFmpeg • \LaTeX

Familiar:

PHP • Qt • Visual Basic •

Java • MySQL • C

LANGUAGES

Mother tongues:

Catalan, Spanish.

Foreign languages:

English (Cambridge Certificate in
Advanced English), basic Danish.

STRENGTHS

Leadership, Work Ethic, Team Work,
Organization and Time Management,
Communicative and Social Skills.

REFERENCES AVAILABLE ON REQUEST

EXPERIENCE

F.C. BARCELONA LASSA | LEAD DATA ANALYST

July 2017 – October 2017 | Barcelona, Spain

Gathered a novel basketball database and trained a Machine Learning model from scratch to assess the hiring process by predicting player's performance (statistics after acquisition).

1D3A (ERIC SPORTS) | COMPUTER VISION INTERN

September 2016 – January 2017 | Barcelona, Spain

Implemented a new way to generate fast and robust sport video reports using FFmpeg and C#; provided technological solutions to the Rafa Nadal Academy (video automation).

AALBORG UNIVERSITY | STUDY JOB, PHD ASSISTANCE AT VAP LAB

March 2016 – September 2016 | Aalborg, Denmark

Segmentation and generation of training data, containing either traffic sequences or chicken entrails. Posterior evaluation and comparison of Computer Vision techniques on labelled data.

NEUROELECTRICS | SOFTWARE DEVELOPER INTERN

June 2014 – October 2014 | Barcelona, Spain

Designed an automatic algorithm to check the performance of electroencephalogram tests; recognized movement patterns from accelerometer data of neuro-helmets.

EXTRA-CURRICULAR EXPERIENCE

MAGMA, ASSOCIATION TO PROMOTE YOUTH RESEARCH | SCIENCE

DISSEMINATION, DIFFERENT POSITIONS IN THE BOARD OF DIRECTORS

General Coordinator | From December 2016

President | October 2014 - October 2016: Responsible of negotiating new affiliations with other science associations, writing agreements and coordinating trips.

Exporecerca Jove Fair Director | April 2013 - October 2014. Led a team of 60 people to perform the biggest science fair in Spain. Used social skills to appear in national media.

BASKETBALL COACH AND JOURNALIST From 2009 | Spain

Wrote articles in three sports media (i.e. **Solobasket**). Assistant coach of **F.C. Barcelona** u15 team, obtaining leadership and communication skills, plus teamwork.

PROJECTS AND PUBLICATIONS

SINGLE-CAMERA BASKETBALL TRACKER THROUGH POSE AND SEMANTIC FEATURE FUSION

Published in the International Conference of Artificial Intelligence on Sports July 2019 | Paris

MULTI-PERSON TRACKING BY MULTI-SCALE DETECTION IN BASKETBALL SCENARIOS

Published in the Irish Machine Vision and Image Processing Conference August 2019 | Dublin

IDENTIFYING BASKETBALL PLAYS FROM SENSOR DATA; TOWARDS A LOW-COST

AUTOMATIC EXTRACTION OF ADVANCED STATISTICS

Published in the IEEE International Conference on Data Mining Series (DAPS Workshop) - November 2017 | New Orleans, United States of America

INITIATING GRABCut BY COLOR DIFFERENCE FOR AUTOMATIC FOREGROUND EXTRACTION OF PASSPORT IMAGERY

Published in the Sixth IEEE International Conference on Image Processing Theory, Tools and Applications - December 2016 | Oulu, Finland

TRACKING OF A BASKETBALL BALL: TOWARDS AN AUTOMATIC DETECTION OF INFRACTIONS

Bachelor Thesis: awarded with 3 national prizes. Participated in Expo-Sciences Europe 2016 - July 2015 | Toulouse, France

DIGITALIZATION OF A BASKETBALL COACH BOARD

High School Final Project: awarded with 3 national prizes. Participated in Intel ISEF - May 2012 | Pittsburgh, United States of America