JASON OMEDES

Zaragoza, SPAIN Jason.omedes@gmail.com

Linkedin.com/in/jasonomedes Github.com/jasoromir

About me: Highly passionate about solving problems and learning new things. Started playing with puzzles as a kid led me to obtain a PhD in Brain Computer Interfaces. After 6 years of hard work and research, I spent 1.5 years traveling the world and volunteering. This self-development and mind-opening journey granted me the opportunity of managing the yoga program in a meditation school of Thailand before the pandemic started. In the present, I have been updating my skills to become and exceptional data scientist.

EDUCATION

PhD Brain Computer Interfaces Thesis — **Sep'2013 – Jan'2019**
University of Zaragoza – School of Engineering — Zaragoza, SPAIN
- Analysis and decoding of electroencephalographic signals for control of devices, neuro-rehabilitation and motor substitution.

M.S. Biomedical Engineering Thesis — **Sep'2012 – Jan'2013**
University of Zaragoza – School of Engineering — Zaragoza, SPAIN
- Improve the decoding of "Error-related potentials" using frequency features.

M.S. + B.S. Industrial Engineering Thesis — **Sep'2006 – Jan'2012**
University of Zaragoza – School of Engineering — Zaragoza, SPAIN
- Design of navigability maps for indoor scenes from omnidirectional vision

Specialization Course — **Aug'2010 – Jun'2011**
Oklahoma State University — Stillwater, OK
- **Relevant Courses**: Neural Nets, Computer Vision, Image & Signal Processing, Project Management
- Bancaja Scholarship (Tuition + Fees + 3000€ awarded for only 3 candidates among all UZ engineering programs)

PROFESSIONAL EXPERIENCE

R&D Engineer — **Aug'2013 – Jan'2019**
Institute of Investigation and Engineering of Aragón (I3A) - University of Zaragoza — Zaragoza, SPAIN
- Implemented signal processing and machine learning techniques to characterize error potentials extracted from brain signals using electroencephalography, leading to more than 10 publications in international journals and conferences.
- Conducted a total of 11 experiments to record EEG signals of over 100 volunteers, equivalent to over 2000hours of data.
- Mentored 5 students and directed one of them during his BS thesis. thesis
- First runner-up in a national contest to present PhD thesis in under 3 min using plain language video

Visiting-Researcher — **Mar'2017 – Nov'2017**
Institute of Medical Psychology and Behavioral Neurobiology- University of Tübingen — Tübingen, GERMANY
- Integrated electroencephalographic and neuro-muscular electrical stimulation techniques to explore the impact of stimulation dose in the elicited brain waveforms for neuro-rehabilitation purposes.
- Collaborated as part of a 10-memebers multidisciplinary team to perform experiments in people with stroke.

Visiting-Researcher — **Apr'2016 – Oct'2016**
Institute of Neural Engineering - Graz University of Technology — Graz, AUSTRIA
- Designed a virtual interface to perform the first studies in the generation of "Error Potentials" during realistic movements.
- Participated in the MoreGrasp consortium, composed of 6 universities, industry and rehabilitation centers, for the development of a non-invasive multimodal neuroprosthesis for individuals with spinal cord injury.

Research Assistant Fellowship — **Oct'2012 – Jul'2013**
Institute of Investigation and Engineering of Aragón (I3A) - University of Zaragoza — Zaragoza, SPAIN
- Analyzed over 40h of pre-recorded EEG signals and proposed the usage of alternative features to improve the decoding generalization in 20%.

Research Initiation Fellowship — **Oct'2011 – Jun'2019**
Institute of Investigation and Engineering of Aragón (I3A) - University of Zaragoza — Zaragoza, SPAIN
- Proposed new heuristics to enhance the state-of-the-art in recovering the scene layout from omnidirectional images.
- Evaluated the performance in 3 datasets (>50k images), one of them self-collected, leading to 2 publications. video

SKILLS

- **Programming Languages & Aptitudes:** Python + packages (e.g. numpy, pandas, scikit-learn, matplotlib), MATLAB, SQL, SPSS, Excel, Tableau, GIT, Tensorflow, Keras, PyTorch, Spark, C++, HTML, CSS
- **Machine Learning:** Regression (e.g. Linear, Logistic, SVR, Random Forest), Classification (e.g. LDA, SVM, Naïve Bayes, Random Forest), Clustering, Deep Learning, Reinforcement learning
- **Data Science:** Statistics (e.g. T-test, ANOVA, Monte Carlo, Bootstrapping), Data processing (cleansing, wrangling, visualization, modeling)

PUBLICATIONS

6 International Journals, 6 International Conferences, 3 International Workshops, 1 Book Chapter, 1 National Conference
Google Scholar: https://scholar.google.com/citations?user=9Nw9_GEAAAAJ&hl=en

SELECTED COURSES

Advance Data Science | Artificial Intelligence | Machine Learning | Deep Learning | Tensorflow2 for DL | NLP | SQL | Algorithms & Data Structures

VOLUNTEERING

Hospital (MYANMAR) | Orphanage (CAMBODIA) | School (LAOS) | Yoga & Meditation (THAILAND) | Mindful Farm (THAILAND) | Exchange Students (SPAIN)