

Alberto Casas Ortiz

APPLIED ARTIFICIAL INTELLIGENCE · MACHINE LEARNING · COMPUTER SCIENCE · RESEARCH

Calgary, Alberta, Canada

+1 (587) 703-4126 | contact@albertocasasortiz.com | www.albertocasasortiz.com
[albertocasasortiz](#) | [Alberto Casas Ortiz](#) | [albertocasasortiz](#) | [albertocasasortiz](#)

Summary

Computer Sciences Engineer and Researcher. BSc in Computer Sciences Engineering & MS in Artificial Intelligence. Currently PhD Student in Intelligent Systems.

Education

PhD in Intelligent Systems

Madrid, Spain - Remote

UNIVERSIDAD NACIONAL DE EDUCACIÓN A DISTANCIA (UNED)

Nov. 2020 - Present

- Artificial Intelligence, Augmented/Virtual Reality, Interpretable Machine Learning, User Modeling, Motor Skills Learning, Learning Theory, Personalized Learning
- Thesis: Applications of different Artificial Intelligence techniques and Augmented/Virtual Reality technologies to assess the learning of motor skills.

Master's Degree in Artificial Intelligence

Madrid, Spain

UNIVERSIDAD NACIONAL DE EDUCACIÓN A DISTANCIA (UNED)

Oct. 2018 - Jul. 2020

- Data Mining, Evolutionary Computation, Computer Vision, Autonomous Robots, Bio-inspired Neural Methods
- Thesis: Applications of Neural Networks to capture, model and analyze human motion, as well as giving feedback, to assess the learning of motor skills.

Bachelor's Degree in Computer Sciences Engineering

Madrid, Spain

UNIVERSIDAD COMPLUTENSE DE MADRID (UCM)

Oct. 2012 - Jul. 2016

- Artificial Intelligence, Specialized in Machine Learning, Reinforcement Learning, Evolutionary Computation, Computability Theory, Algorithms and Data Structures.
- Thesis: Application of Reinforcement Learning (Watkin's Algorithm) in real time strategy (RTS) videogames.

Work Experience

Scientific Software Engineer & Researcher

Calgary, Canada

UNIVERSITY OF CALGARY

Jul. 2020 - Present

- Creation of the multi-platform application VariantStart to visualize and modify Variant Call Format (VCF) files. This tool is also able to use machine learning techniques to prioritize variants and genes to respect to its deleteriousness and the probability of being causal of a phenotype.
- Research of techniques and the application of different machine learning algorithms and structures for variant prioritization.
- Expand the project WFES with new functionalities, libraries and a multi-platform graphical user interface.
- Dissemination of research in scientific congresses and journals.

Software Engineer

Madrid, Spain

TECNITIA TECHNOLOGIES S.L.

Oct. 2016 - Mar. 2018

- Development and Design of a web platform for management of CIOMS reports of clinical cases in pharmaceutical laboratories.
- Development of a experimental chatbot for websites able to recognize syntactical and grammatical errors.
- Development of a web platform able to assess supply and demand of IT jobs on a country.
- Enhancement of a web platform for budget management for the public company ADIF.
- Development of the company's website.
- Technologies: Java, Python, JavaScript, HTML5, CSS3, PHP, UML, SQL, JQuery, JSP, Apache Tomcat, Oracle Server, MySQL Server, Microsoft Server, WordPress

Software Engineer Intern

Madrid, Spain

HOSPITAL CENTRAL DE LA DEFENSA GÓMEZ ULLA

Jun. 2015 - Dec. 2015

- Development of a multimedia streaming web platform to visualize recorded medical consultations.
- Development of a tool to convert videos in physical format to digital format.
- Technologies: C++, JavaScript, HTML5, CSS3, JQuery, FFmpeg, H265, Microsoft Server

Skills

Programming	C/C++, Python, Java, C#, QML (Qt), JavaScript, SQL, MATLAB/OCTAVE, Assembler, Perl
Python for Science	Numpy, Pandas, Tensorflow, Keras, Scikit-learn, matplotlib-lib, OpenCV
C++ for Science	Boost, OpenCV, Intel MKL, ViennaCL, OpenMP
Supervised Learning	Neural Networks, SVM, Linear and Logistic Regression, Decision Trees (Random Forest and Gradient Boosting)
Neural Networks	FFN, 1D-CNN, 2D-CNN, RNN, LSTM, PINN, GAN, GRU, NEAT
Reinforcement Learning	Watkin's Algorithm, Q-Learning, deep RL
Unsupervised Learning	Clustering, k-NN, k-Means, Unsupervised Decision Trees
Evolutionary Computation	Neuroevolution, Genetic Algorithms, Grammatical Evolution, Genetic Programming, Evolution Strategies
Virtual Reality	Head Mounted Displays, Oculus VR Programming, Unity 3D, User Interaction and Design
Human Motion	Capture Devices, Modelling Algorithms, Analysis Algorithms, Feedback Strategies, 3D Representation
Robotics	ROS (Robot Operating System), Gazebo, Arduino, Android, Sensors, Electronics
Web Development	HTML5, CSS3, JavaScript, Ajax, JQuery, JSON, JSP, PHP, Wordpress
Database	SQL, MySQL Workbench, SQL Server, Oracle SQL, SQLite
Graphics	Blender (3D), Inkscape (Vectorial), Gimp (2D), GUI, UX
IDEs	Qt Creator, JetBrains (IntelliJ, Pycharm, CLion), Unity3D, Visual Studio, Android Studio, Eclipse

Certifications and Courses

2020	Deep Learning Specialization	Coursera
2018	Associate Android Developer	Google Developers
2017	ITIL® Foundation Certificate in IT Service Management	AXELOS Global
2017	Associate Android Developer Fast Track	Udacity
2014	Basic Digital Marketing	Activate con Google
2014	Mobile Apps Development	Activate con Google

Publications

Artificial Intelligence to develop systems that support psychomotor learning	Edward Elgar Publishing
ALBERTO CASAS-ORTIZ & OLGA C. SANTOS	<i>Exp. 2022</i>
<ul style="list-style-type: none">Chapter 8 of the book "Handbook of AI in Education".Accepted. Awaiting publication.	
Dexmedetomidine does not compromise neuronal viability, synaptic connectivity, learning and memory in a rodent model	Scientific Reports
NEREA JIMENEZ-TELLEZ; FAHAD IQBAL; MARCUS PEHAR; ALBERTO CASAS-ORTIZ; TIFFANY RICE & NAWEED I SYED	<i>Aug 2021</i>

Conferences, Posters and Seminars

KSAS: A Mobile App with Neural Networks to Guide the Learning of Motor Skills	CAEPIA
ALBERTO CASAS-ORTIZ & OLGA C. SANTOS	<i>Sep. 2021</i>
<ul style="list-style-type: none">App at CAEPIA (Congreso de la Asociacion Española Para la Inteligencia Artificial)	
KSAS: An AI Application to learn Martial Arts Movements in on-line Settings	AIED
ALBERTO CASAS-ORTIZ & OLGA C. SANTOS	<i>Jun. 2021</i>
<ul style="list-style-type: none">Interactive Event at AIED (Artificial Intelligence in Education)	
WFES2-GUI: A User-Friendly Simulation-Free Workbench for Direct Computational Analysis of Time-Heterogeneous Models in Population Genetics	GLBIO
A. CASAS-ORTIZ, I. KRUKOV, B. DESANCTIS & A. P. J. DE KONING	<i>May. 2021</i>
<ul style="list-style-type: none">Poster at GLBIO (Great Lakes Bioinformatics Conference)	
Ciencia y Datos en las Artes Marciales	SCIE
OLGA C. SANTOS & ALBERTO CASAS-ORTIZ	<i>Nov. 2019</i>
<ul style="list-style-type: none">Seminar at Semana de la Ciencia e Innovación 2019	

Honors & Awards

- 2021 **Accessit**, Best Master's Thesis - eMadrid Awards *Madrid, Spain*
- 2015 **Honourable Mention**, Emergent Scientific and Technological Scenarios and the Defense - UCM *Madrid, Spain*
- 2014 **2nd Place**, IKKA Spain Championship - +75Kg *Madrid, Spain*

Extracurricular Activity

Founder, Manager, Developer, Designer and Artist

AIDA VIDEOGAMES

Development of the video-game Minimalist. Available in Play Store and Amazon Marketplace

Assistant Professor

KENPO KARATE ESTUDIO

11 years practicing -

Referee and Volunteer

IKKA ESPAÑA - CHAMPIONSHIPS AND TOURNAMENTS

Completed 2 referee courses

Additional Information

Languages	Spanish (Native) English (Proficient)
Work Permit	European Union - Open Work Permit (EU Citizen) Canada - Open Work Permit (Due Date: July 2022)
Driving License	Spain - Classes: B (Car) and A1 (Motorcycle)
Martial Arts	1st Degree Brown Belt - American Kenpo Karate (IKKA)