

Juan Camilo Arévalo Arboleda

Ph.D. student in Computer Science and Engineering

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ArevaloCamilo

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Summary

Computer scientist with expertise in audio processing, audio spatialization, extended reality (XR) development, interactive systems, machine learning, and web development. Experience in international and interdisciplinary research groups. Stands out for excellent performance in programming code and versatility between programming languages and tools.

Interests: Research, XR development, high-performance computing, and machine learning.

Experience

Teaching Assistant

Currently —04/2019

University of Aizu

Aizuwakamatsu, Japan

- Assist lectures and exercises of virtual reality, sound and audio processing, C++ programming, computer graphics, introduction to data management, and introduction to multimedia.
- Tasks: Prepare material for lectures, grade undergraduate courses exercises/quizzes, and solve student doubts regarding the course contents.

Research Assistant

12/2018 —06/2018

Pontifical Javeriana University Cali

Cali, Colombia

- Built an online game "Tramas: parques intercultural," as a didactic tool to promote the intercultural dialogue.
- Perform user validations.
- Server deploy and administration.

Internship

11/2018

University Complutense of Madrid

Madrid, Spain

- Researched and implemented a tracking map for artwork of artistic heritage value during the Spanish civil war and postwar.
- Server administration.

Research Assistant

12/2014 —08/2014

Pontifical Javeriana University Cali

Cali, Colombia

- Researched, designed, and implemented an algorithm capable of finding salsa song choruses for the construction of a data set.

Education

Ph.D. in Computer Science and Engineering

(expected graduation) 03/2024 —04/2021

University of Aizu

Aizuwakamatsu, Japan

Research topic: Audio spatialization, all grades A.

M.Sc. in Computer Science and Engineering

03/2021 —04/2019

University of Aizu

Aizuwakamatsu, Japan

Research topic: Audio spatialization, all grades A.

B.Sc. in Computer Science

11/2018 —07/2012

Pontifical Javeriana University Cali

Cali, Colombia

GPA: 3.81/5.0. Program with ABET international accreditation.

Achievements

- Outstanding student research assistantship**
Granted by the University of Aizu for the period 04/2022—03/2023 due to the performance during the first year of the doctoral program.
- 3rd prize in AES student competition: MATLAB plugin 2021**
International competition to design an audio production VST plugin using MATLAB.
- Cum Laude baccalaureate in computer sciences**
Granted by the Pontifical Javeriana University Cali.
- 3rd prize in Expo poster REDIS South West Node 2018**
Research graduation contest held by 21 undergraduate Computer Science programs institutions in Colombia.
- Ranked 8th in the ACM ICPC South America / North Regional 2016**
Member of "PUJC-CodeBreakers" team from 2013 to 2016 (best rank at 2016).

Publications

Search author as **Camilo Arevalo** or with the ORCID 0000-0002-3505-2092 in [Google scholar](#) or [Research Gate](#). 3 journals and 8 conference papers. Relevant papers:

- Virtual Reality Tool for Exploration of Three-Dimensional Cellular Automata.
- Usability and Narrative Geolocation for the Monitoring of Spanish Artistic Heritage.
- Real-time Spatialization via Eigen Decomposition of Head-related Transfer Functions.

Skills

Programming

C/C++/C#	(6 years)
Python	(6 years)
JavaScript	(4 years)
PHP	(4 years)
R	(4 years)
SQL	(4 years)
Java	(2 years)
Lisp	(2 years)
Ruby	(2 years)

Languages

Spanish	(Native)
English	(Fluent)
Japanese	(Intermediate)

Frameworks & tools

Matlab	(5 years)
Unity	(5 years)
AngularJS	(3 years)
Arduino	(3 years)
Bootstrap	(3 years)
MySQL	(3 years)
NodeJS	(3 years)
OpenMP/MPI	(3 years)
Pure Data	(3 years)
Keras	(2 years)
OpenCV	(2 years)
Docker	(2 years)
React	(2 years)

January 17, 2023