





JUAN OLAYA


(BSc) COMPUTER ENGINEERING


(MSc) COGNITIVE SYSTEMS AND INTERACTIVE MEDIA

 [OpenProcessing](#)

 [Github Repository](#)

 [Youtube Videos](#)

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 juanolayafi@gmail.com

EDUCATION

- **COGNITIVE SYSTEMS AND INTERACTIVE MEDIA**

Master's Degree taught in English
Pompeu Fabra University
Barcelona, Spain (2014)

- **COMPUTER ENGINEERING**

Bachelor's Degree
Pontifical Xavierian University
Bogotá, Colombia (2011)

TEACHING EXPERIENCE

Two-years and half experience as associated teacher in the university School of Arts and Letters in Bogotá-Colombia, in the bachelor Digital Media Engineering for the following lectures:

(2016.2 - Present)

Artificial Intelligence for Video Games

Lecturer. Game design principles, Non-player characters' AI behaviours, Agile game development, Scripting in Unity 3D, Interactive Narrative and Quality Assurance (QA).

(2017.1)

[\[Github Link\]](#)

Object-Oriented Programming (OOP)

Lecturer. Creative code using the Java library Processing and its web version P5.js. Abstraction from concepts to Classes, Encapsulation, Inheritance, Polymorphism and Collision detection.

(2017.2 – Present)

[\[Github Link\]](#)

Computer Graphics

Lecturer. Computer vision, Physics Engine, particle systems, communication among computers with OSC protocol, sound visualization, integration with Arduino and Kinect.

(2016.2 - Present)

Virtual Reality

Lecturer. Principles of VR, Moving in VR with Unity 3D, VR Reticle, VR Game Mechanics, Cardboard, VR frameworks and its patterns and Agile game development.

(2017.2)

[\[Github Link\]](#)

Creating Video Games

Lecturer. Paper prototype, Game designer principles, Agile game development, Game mechanics, User engagement, Industry awareness and Game Design Document (GDD).

(2017.2)

IT for Industries

Lecturer. Lean startup, Business model patterns and canvas, Industry analysis, Monetization and Business pitch.

(2017.1 – Present)

Software Engineering and HCI

Lecturer. Requirements elicitation, Foundations of Human-Computer Interaction (HCI), UML diagrams, Software patterns, Project Management, Agile software development and User Experience (UX) foundations.

(2017.2 – Present)

RESEARCH EXPERIENCE

- **XIM EXPRESSIONS – Master's Thesis**

Researcher. We designed and executed an experiment in the field of Human Computer Interaction (HCI) to study human behaviour exposed to visual stimuli within a multi-wall system, Cave Automatic Virtual Environment (CAVE). In this experiment we analysed, whether affective visuals signals are effective to provide social capabilities to a CAVE system and whether these signals, are useful to increase the performance of users, in certain Full-Body interactive tasks.

Barcelona, Spain (2014)

[\[Video Link\]](#)

[\[Report Link\]](#)

- **AGILE CONSTRUCOLECTIVA – Undergraduate Thesis**

Researcher. We conducted a research to optimize the Software Engineering process, through the use of Agile methodologies and Computer-Supported Cooperative Work (CSCW). As a result, a Methodological Guide was developed for the management of the development of software projects. This project obtained the first place in the project fair of Computer Engineering, Expo Poster 2010.

Bogotá, Colombia (2011)

[\[Thesis Link\]](#)

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PUBLICATIONS

- **Paper: Full-Body interaction for Live Coding**
In: [International Conference on Live Coding](#)
MediaLab Prado (2019)
[\[Paper Link\]](#) [\[Poster Link\]](#)
Madrid, Spain
- **Paper: Expresiones del XIM: Socializando con un robot no antropomórfico**
In: Revista Encuadre (April-2019) to appear
Bogotá, Colombia
- **Poster: Agile ConstruColectiva**
In: Expo Poster (2010)
Bogotá, Colombia
[\[Poster Link\]](#)

INFORMATION TECHNOLOGY EXPERIENCE

BAKER TILLY – Audit Firm

IT Auditor. Assessment of technology environments with the aim of identifying risks that affect the reliability of the Internal Control of IT.
Bogotá, Colombia (2015)

AMÉZQUITA – Audit Firm

IT Auditor. Formulate opportunities for improvement to strengthen IT processes associated with the appropriate use of technology resources.
Bogotá, Colombia (2016)

ADDITIONAL QUALIFICATIONS

- **Unity Certified Developer**
Certification ID : 201707UCD2353
Bogotá, Colombia (2017)
[\[Unity Certification Link\]](#)
- **IELTS – Certificate of Proficiency in Academic English**
Level B2 – Upper Intermediate
London, UK (2012)
- **South Thames College – Academic English**
London, UK (2012)

TECHNICAL SKILLS

PROGRAMMING LANGUAGES: C#, Java, JavaScript, C/C++.

TOOLS: Unity 3D Game Engine, Microsoft Kinect sensor, SPSS Statistics, Arduino, Processing IDE, Open Sound Control (OSC) protocol, Microsoft Project and Eclipse IDE.

DESIGN METHODOLOGIES: Requirements elicitation, Software patterns development and Unified modelling language (UML) for: Class Diagram, Use case diagram, Flowchart and Sequence diagram.

IT PROJECT DOCUMENTATION: Software Project Management Plan (SPMP), Software Design Document (SDD), Business Model Canvas, Game Design Document (GDD) and Technical Design Document (TDD).

REFERENCES

- **Pedro Omedas**
Researcher
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[Laboratory of Synthetic Perceptive, Emotive and Cognitive Systems \(SPECS\)](#)
Pompeu Fabra University
Barcelona, Spain
- **Narcís Parés Burguès**
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[Cognitive Media Technologies \(CMTech\)](#)
ICT Engineering
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Barcelona, Spain
- **María Consuelo Franky**
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