

# Pablo Sauma-Chacón

Costa Rican

## Educational Experience

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### Doctor of Philosophy in Computing

University of Utah

Salt Lake City, UT, USA

August, 2023 – Ongoing

### Master of Science in Computer Science and Information Technology

Universidad de Costa Rica

San Pedro, Costa Rica

March, 2017 – April, 2021

Thesis: Improving cooperation between human and computer players through plan recognition in the game Pandemic

### Bachelor of Computer Science and Information Technology

Universidad de Costa Rica

San Pedro, Costa Rica

March, 2012 – August, 2016

## Scholarships and Awards

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**Fulbright Scholarship:** Granted LASPAU scholarship starting on Fall 2023

**Honor mention:** Master of Science in Computer Science and Information Technology, April 2021

## Professional Experience

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### Adjunct Professor

School of Computer Sciences and Information Technology

Universidad de Costa Rica

Mar. 2019 - Jul. 2023

### Software developer

API development and deployment

PsyCat Games

Jan. 2021 - Sep. 2022

### Artificial Intelligence and Interactive Digital Entertainment Conference

Publicity Co-Chair, Program Committee Member and reviewer for the Artifact Evaluation Track

University of Utah

2023

### Artificial Intelligence and Interactive Digital Entertainment Conference

Program Committee Member and reviewer for the Artifact Evaluation Track

Cal Poly Pomona

2022

### Artificial Intelligence and Interactive Digital Entertainment Conference

Reviewer for the Artifact Evaluation Track

Virtual

2021

## Research Experience

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### Heuristic refinement using neural network for planning applied to games

Main Researcher, research project No. 834-C1-074

Universidad de Costa Rica

Mar. 2021 - Sep. 2022

### Planning and plan recognition in Unity

Research Associate, research project No. 834-C0-701

Universidad de Costa Rica

Mar. 2020 - Dec. 2020

### Non-verbal communication in cooperative video games

Research Associate, research project No. 834-B9-341

Universidad de Costa Rica

Jul. 2019 - Apr. 2020

## Publications

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**Sauma-Chacón, Pablo** and Markus Eger. Evaluating a plan recognition agent for the game Pandemic with human players. In *2021 IEEE Conference on Games (CoG)*, pages 1–7, 2021.

**Sauma-Chacón, Pablo** and Markus Eger. PAIndemic: A planning agent for Pandemic. *Proceedings of the AAAI Conference on Artificial Intelligence and Interactive Digital Entertainment*, 16(1):287–293, Oct. 2020.

Markus Eger and **Sauma Chacón, Pablo**. Deck archetype prediction in Hearthstone. In *International Conference*

on the Foundations of Digital Games, FDG '20, New York, NY, USA, 2020. Association for Computing Machinery.

Markus Eger, Chris Martens, **Sauma-Chacón, Pablo**, Marcela Alfaro Córdoba, and Jeisson Hidalgo Cespedes. Operationalizing intentionality to play Hanabi with human players. *IEEE Transactions on Games*, pages 1–1, 2020.

**Sauma-Chacón, Pablo** and Markus Eger. Pandemic as a challenge for human-AI cooperation. In *Proceedings of the AIIDE workshop on Experimental AI in Games*, 2019.

**Sauma-Chacón, Pablo** and Markus Eger. Ex-tarot: An extended tarot-based narrative generation. In *2019 IV Jornadas Costarricenses de Investigación en Computación e Informática (JoCICI)*, pages 1–6, 2019.

Esteban Rodríguez-Betancourt, **Sauma-Chacón, Pablo**, and Edgar Casasola-Murillo. Deep neural network comparison for spanish tweets polarity classification. In *2019 XLV Latin American Computing Conference (CLEI)*, pages 1–6, 2019.

## Teaching Experience

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### CI-0110 – Introduction to Computer Sciences

Python programming for computer science students

Universidad de Costa Rica

Spring 2021, 2023

### CI-0118 – Assembly Language

Assembly level programming

Universidad de Costa Rica

Fall 2019, 2020, 2021 & Spring 2022, 2023

### PF-3341 – Artificial Intelligence for Digital Entertainment

Use of artificial intelligence in the context of digital entertainment

Universidad de Costa Rica

Summer 2023

### CI-0148 – Machine Learning

Machine learning algorithms and models

Universidad de Costa Rica

Spring & Fall 2022

### CI-0134 – Research in Computer Science

Research oriented course

Universidad de Costa Rica

Fall 2022

### CI-0130 – Modeling and Optimization Methods

Linear programming, Markov chains, queues and simulation

Universidad de Costa Rica

Spring & Fall 2022

### CI-0113 – Programming II

Pointers, inheritance, polymorphism and templates in C/C++

Universidad de Costa Rica

Fall 2020 & Fall 2022

### CI-0112 – Programming I

Control structures, functions, arrays, recursivity and OOP in Java

Universidad de Costa Rica

Spring 2020 & Fall 2021

### CI-0116 – Algorithms and Data Structures

Sorting algorithms, data structures, graphs, shortest path algorithms

Universidad de Costa Rica

Spring 2021

### CI-0202 – Computer Science Principles

Introductory Python programming for engineers

Universidad de Costa Rica

Spring & Fall 2019, Spring 2020

## Skills

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### Languages

- **Spanish:** Native
- **English:** Proficient

### Programming Languages

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|---------|----------|------------|
| ○ C/C++ | ○ Python | ○ M        |
| ○ Java  | ○ C#     | ○ Assembly |