

# Jorge Sánchez Aguilar

Final-year Computer Science student focused on artificial intelligence and applied machine learning with experience in Python, PyTorch, and data-driven systems.

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## EDUCATION

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### Universidad Rey Juan Carlos

Madrid, Spain

B.S. in Computer Science

Expected Graduation, June 2026

- **Concentrations:** Artificial intelligence and Modeling/Simulations
- **Grade:** 7.5/10
- **Related Coursework:** Data Structures & Algorithms, Objects & Design, Computer Organization & Programming, Combinatorics, Machine Learning, Artificial Intelligence, Object-Oriented Programming, Statistics & Applications

### 42 Madrid

Madrid, Spain

Peer-to-peer software engineering program

Expected Graduation, March 2026

- **Level:** 3 (80% completed)
- **Focus Areas:** C Programming, UNIX/Linux System Programming, Data Structures & Algorithms, Object-Oriented Programming, Artificial Intelligence and Machine Learning

## EXPERIENCE

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### Hotel Wellington & Four Seasons

Madrid, Spain

Lifeguard / Assistant Pool Manager

Summer 2021 (July – August)

- Ensured guest safety and satisfaction in luxury hotel environments
- Demonstrated strong responsibility, vigilance, and communication skills
- Collaborated closely with team members to maintain operational standards

## AWARDS & COMPETITIONS

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### [Qubic + VOTTUN Hackathon 2025 \(Madrid\)](#) — Top 10 Finalist

- Built a real-time blockchain account monitoring dashboard with multi-channel notifications
- Pitched the project to a panel of VCs and industry experts

## PROJECTS

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### [SnakeAI](#) — Solo Project

Python, PyTorch, Seaborn, Matplotlib

- Developed a deep reinforcement learning agent for the Snake game, optimizing reward shaping and training efficiency
- Leveraged GPU-accelerated PyTorch for scalable training and performed detailed statistical analysis of performance metrics
- Designed an interactive gameplay interface for real-time testing and debugging
- Currently enhancing the agent's intelligence and effectiveness

### [Ring Door](#) — Co-Developer

C++, Arduino, Node.js, ESP32-CAM

- Built a multi-factor authentication system combining NFC card scanning, fingerprint recognition, and motion detection
- Implemented real-time security monitoring with photo capture on access attempts and detailed logging
- Contributed to system architecture integrating ESP32-CAM, Arduino controllers, and a Node.js backend

## SKILLS

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**Programming:** Python (PyTorch, NumPy, Pandas, Seaborn, Matplotlib), Java, C, C++, Scala, PostgreSQL, MySQL

**Tools:** Git, Linux/Unix, Azure, Docker, JupyterLab, VS Code, IntelliJ, PyCharm, Arduino, ESP32

## LANGUAGES

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**English** — C2 Proficiency (CEFR)

**Spanish** — Native