Antonio Cañete

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Education

Universidad de Málaga Jun 2025

Bachelor of software engineering (Final grade: 9.38 / 10.0) *Málaga, Spain*

- **Relevant Coursework:** Algorithm analysis and design (Java), Computer Vision (Python), Data Structures (Haskel), Prob & Stat in CS (Python), Intro to CS (C++), Linear Algebra

Technical Skills

Languages: Java, Python, C, Bash, C++ , C#, R, Haskell, Dart
Technologies: Flutter, Unity, TensorFlow, PyTorch, Bootstrap, Android SDK
Concepts: Compiler, Operating System, Virtual Memory, Cache Memory, Encryption, Decryption, Artificial Intelligence, Machine Learning, Neural Networks, API, Database Normalization, Agile Methodology, Cloud Computing

Experience

MAPIR - University of Málaga April 2024 – Present

Specialist Technician *Málaga, Spain*

- Developed and implemented software for mobile robots, focusing on Human-Robot Interaction (HRI) and perception systems.
- Designed and optimized AI models for edge and cloud computing environments, ensuring seamless integration and real-time processing.
- Enhanced robot perception capabilities through the implementation of face detection, pose estimation, and motion flow analysis using neural networks.
- Collaborated on experimental setups to validate HRI algorithms, improving interaction efficiency and user satisfaction.
- Integrated advanced motion flow techniques to improve the robot's spatial awareness and responsiveness in dynamic environments.

Projects

A-Star Navigator | *Java, Algorithm Design*

- Implemented the A* pathfinding algorithm in Java to compute optimal routes in graph-based systems, enhancing efficiency in navigation applications.
- Developed a user-friendly interface to visualize algorithm performance, facilitating educational demonstrations and debugging processes.

Fake Accounts Detection | *R, Data Analysis, Machine Learning*

- Conducted data analysis and regression modeling in R to identify fraudulent Instagram accounts, improving platform security and user trust.
- Presented findings in a comprehensive Quarto book, demonstrating proficiency in data storytelling and technical documentation.

Password Genie | *Angular, Web Development, Cybersecurity*

- Developed a web application in Angular for generating customizable passwords and assessing password strength, promoting best practices in cybersecurity.
- Implemented user-friendly interfaces and real-time feedback mechanisms to enhance user experience and security awareness.

LiveTrafficEye | *Python, OpenCV, TensorFlow*

- Developing a real-time traffic monitoring system utilizing live video streams, implementing computer vision techniques with OpenCV and AI models with TensorFlow to analyze traffic patterns and enhance urban mobility.
- Integrating machine learning algorithms to detect and predict traffic congestion, contributing to smarter city infrastructure.

TicTacTouch | *C++, .NET, GUI Development*

- Created a classic Tic-Tac-Toe game with an intuitive graphical user interface using C++ and .NET, offering multiple difficulty levels to challenge users.
- Applied object-oriented programming principles to ensure code modularity and maintainability.