

# IVÁN SOTILLO DEL HORNO

📍 Madrid, Spain | Open to Relocation

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## EDUCATION

### Universidad Autónoma de Madrid

Master's in Data Science

Madrid, Spain

Sep. 2024 – Jun. 2025

### Universidad Autónoma de Madrid

Bachelor's in Computer Science

Madrid, Spain

Sep. 2020 – Jun. 2024

### Northwestern Polytechnical University (NPU)

Spring School on Gray Systems Theory

Xi'an, China

Spring 2024

### University of Helsinki

Exchange Semester (Erasmus+)

Helsinki, Finland

Aug. 2023 – Dec. 2023

## EXPERIENCE

### Research Staff – SATORI-UAM Project

Dec. 2024 – Present

Universidad Autónoma de Madrid – MISO Research Group

Madrid, Spain

- Built a full-stack web application using React, Tailwind, and Django REST to automate the testing of conversational agents.
- Designed and implemented a conversational profiler using Python, LangGraph, and OpenAI API to identify chatbot functionalities and generate user profiles.
- Integrated the profiler and a user simulator into the system to enable seamless end-to-end chatbot evaluation.

## KEY PROJECTS

### U.D.I.N. | C++, WPF, Microsoft Word Automation

2025

- Developed a desktop application for Windows to assist in vehicle modification homologation.
- Generates three official Word documents required in Spain: technical project, final work certificate, and workshop certificate.
- Used by a professional in the automotive sector; closed-source.

### Bachelor Thesis: Breast Cancer Detection and Explainable AI | Python, Django, LaTeX [CODE] [WEB CODE]

2024

- Compared classical machine learning classifiers for breast cancer diagnosis using Scikit-learn.
- Applied SHAP for interpretability; presented results via a Django-based web interface.
- Authored a thesis in LaTeX detailing methodology, results, and insights.

### AnkiWannabe | Kotlin, Jetpack Compose, Firebase [CODE]

2024

- Developed a mobile flashcard app with cloud syncing, user auth, and Material Design UI.
- Used Firebase Firestore for real-time data storage.

### Reversi AI | Python, Minimax, Alpha-Beta Pruning [CODE]

2023

- Implemented an AI to play Reversi using classic adversarial search algorithms and heuristics.
- Achieved full test coverage and detailed documentation.

## TECHNICAL SKILLS

**Programming Languages:** Python, JavaScript, Java, C, C++, Kotlin, SQL, Bash, R, HTML/CSS, LaTeX

**Web Development:** React, Vue, Astro, Tailwind CSS, Django, Firebase

**Machine Learning & Data Science:** Scikit-learn, TensorFlow, PyTorch, Pandas, NumPy, Matplotlib, SHAP, LangGraph, OpenAI API

**Tools & Environments:** Git, Jupyter Notebooks, Linux, VS Code, Visual Studio, Vim

**Interests:** Open Source Software & Contribution

## LANGUAGES

**Spanish:** Native

**English:** Bilingual Proficiency

**French:** Conversational