

# Maximo Utrera

Computer Science Engineering student (4<sup>th</sup> year)

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## SKILLS

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- **Languages:** English, Spanish
- **Programming Languages:** Java, Python, SQL, TypeScript/JavaScript, C/C++, Go, HTML, CSS
- **Technologies:** Spring Boot, Node, Express, React, Angular, MySQL /MongoDB, Pandas, ML libraries

## EXPERIENCE

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University of Buenos Aires | *Algorithms & Programming Teaching Assistant*

Aug 2022 – Dec 2022

- Created exercises for students emphasizing conceptual understanding of topics (Python)

## EDUCATION

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University of Buenos Aires | *Computer Science Engineering (4<sup>th</sup> year)*

Mar 2020 - Dec 2025

- *Relevant Courses: Mathematical analysis II, Linear algebra, Algorithm theory, Algorithms and Data structures, Programming Paradigms, software engineering I, Operative systems, Databases, Data science, Programming workshop*

### Additional Certifications

- **Cambridge University Press & Assessment** | B2 English Certificate

## PROJECTS

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### [Jazz Jackrabbit 2 – Game Remake](#) (C++, sdl2)

Online battle royale desktop game with up to 8 players per match. Including several characters, weapons and maps. It is also possible to make custom maps using the map editor.

- Made the game from scratch with a team of 4 people, without using any 3<sup>rd</sup> party game engine. That includes graphics, physics, communications over internet and game logic
- Utilized multi-threading programming techniques to make the server more performant at handling a big volume of clients
- Optimized network communication protocols to reduce latency and ensure seamless multiplayer experiences

### [Truco Online](#) (express, web sockets, react, redux)

Employed the **SCRUM agile methodology** with a team of 5 people to make a Real-time online cards game with match-making where players can play against strangers, add friends and challenge them, and climb the global ranking.

- Implemented several back-end functionalities such as user login, global ranking system, web socket management
- Used web sockets to make a matchmaking system and connect players with one another in order to play 1vs1 matches and chat in-game as the game progresses
- Made a minimalistic intuitive UI with react and typescript

### [Machine Learning](#) (pandas, scikit-learn, TensorFlow, keras, python)

Worked with a team to analyze and predict property prices in Buenos Aires and perform sentiment analysis on movie reviews. Used a range of machine learning models for classification and regression tasks.

- Conducted data pre-processing, cluster analysis, classification and regression for property price prediction
- Implemented various ML models including Random Forest, XGBoost, Decision Trees, KNN, Neural Networks, Naive Bayes and Ensembles
- Achieved high accuracy by fine-tuning models and selecting the best algorithms