Samuel **Cerezo**

Electronic Engineer · PhD Student

Pisa, Italy

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Nationality: Argentine, Spanish

"Engineering solutions that travel—across borders, systems, and challenges."

Education

Universidad de Zaragoza
Zaragoza, Spain

PhD in Systems Engineering and Computer Science — *2021 - now*

- Designed and implemented sensor fusion pipelines for full state estimation using GPS, IMU, and RGB-D data. Work included synthetic dataset generation in photorealistic industrial environments and ongoing implementation of real-time C++ algorithms for visual-inertial initialization.
- Supported by competitive research FPI Grant.
- PhD expected to be completed by Dec. 2025.

Universidad Nacional del Comahue
Neuquén, Argentina

Electronic Engineering — *2014 - 2020*

- Got a scholarship from YPF which is given to promising students (€5.000/y for 5 years).
- GPA: 8.69 / 10.

Skills

DevOps	Git, GitHub, Docker, Azure
Programming	C++, Python, Matlab, LaTeX, HTML
Languages	Spanish (native), English (fluent), Italian (conversational)

Experience

KUKA
Augsburg, Germany

PhD Intern — *Apr. 2024 - March 2025*

- Designed and implemented a complete data recording pipeline for a robotic cell. Tools: ROS2, Python, Docker container.
- Provisioned an easily managable set of tools for data syncronization and temporal alignment, through different sources of data.
- Built fully SLAM pipeline for data testing based on 3D Gaussian Splatting for environment representation.

Hydroner Services
Neuquén, Argentina

Software Engineer — *Sept. 2020 - March 2021*

- Designed and deployed IoT-based systems for water transfer in oil wells using Allen Bradley PLCs, achieving a 30% operational cost reduction for the company.
- Provisioned user guide for non-technical employee.

Matra SRL
Neuquén, Argentina

Software Engineer — *Jan. 2020 - Jul 2020*

- Designed and implemented an automated silo control system for on-site storage and management of drilling fluid circuits, using PLCs.
- Provisioned a modular and easily maintainable infrastructure combining PLCs and HMIs, enabling future system enhancements. Developed clear technical documentation and user's guide.

Publications

GNSS-inertial State Initialization by Distance Residuals

S. Cerezo, J. Civera. *Submitted to RA-L, 2025*

SLAM&Render: A Photorealistic Dataset for Visual SLAM in Industrial Environments

S. Cerezo, G. Meli, T. Berriel, K. Safronov, J. Civera. *Submitted to RA-L, 2025*

Camera Motion Estimation from RGB-D Inertial Scene Flow

S. Cerezo, J. Civera. *CVPR 2024, Seattle, USA*

Compressive Sensing Mapping System for Spatial Characterization of Photovoltaic Devices

S. Cerezo, M. Córdoba, F. Quintián. *Argentine Conference on Electronics 2023, Buenos Aires, Argentina*