Samuel **Cerezo**

Electronic Engineer · PhD Student

Pisa, Italy

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Nationality: Argentine, Spanish

"Looking for a dynamic environment where knowledge and research can be transformed into concrete solutions for industry."

Education

Universidad de Zaragoza — *Zaragoza, Spain*

PhD in Systems Engineering and Computer Science — *2021 - 2025*

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

Universidad Nacional del Comahue — *Neuquén, Argentina*

Electronic Engineering — *2014 - 2020*

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

Skills

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

Experience

KUKA — *Augsburg, Germany*

PhD Intern — *Apr 2024 - Mar 2025*

- Designed and implemented a complete data recording pipeline for a robotic cell. Tools: ROS2, Python, Docker container.
- Provisioned a SLAM pipeline including Gaussian Splatting for environment representation along with robot joint readings.

El Chiringo - restaurant — *Zaragoza, Spain*

Waiter — *Feb 2024 - Feb 2025*

- Provided table service in busy hospitality settings during the weekends. Gained experience in customer interaction and order coordination.

Hydroner Services — *Neuquén, Argentina*

Software Engineer — *Sept 2020 - Mar 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.

Matra SRL — *Neuquén, Argentina*

Software Engineer — *Jan 2020 - Jul 2020*

- Designed and implemented an automated control system for on-site management of drilling fluid circuits, combining PLCs and HMIs.

Publications

Camera Motion Estimation from RGB-D Inertial Scene Flow

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

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*

A Closed-Form Solution to Full Visual-Inertial State Initialization

S. Cerezo, H.L. Seong, J. Civera. *On process*