



## Cesar A. M. C. da Silva

Control & Automation Engineering  
(Undergraduate 2021-2026)

- ▶ UNESP – Sorocaba, Brazil
- ▶ Brazilian

## Languages

Portuguese	Native
English	C1
German	A1

## Contact

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- in linkedin/cesar-augusto-silva

## Skills

Microcontrollers & SBCs (Arduino, ESP32, Raspberry Pi, NVIDIA Jetson Nano)	5+ yrs.
Python (Data Analysis, Visualization)	5+ yrs.
C / C++	5+ yrs.

## Motivation

I am a Control & Automation Engineering undergraduate at UNESP (Brazil) seeking a research visit opportunity in Bavaria. My interests lie in robotics, control systems, and AI, especially in perception and human-centered applications such as gait analysis and human-robot interaction. I have hands-on experience through RoboCup (Brazil 2018/2023, Sydney 2019) and projects involving image recognition, scale autonomous vehicles, and recommender systems. I am motivated to contribute to an active research group and apply advanced robotics to develop human-centered technologies that improve people's lives, while building a strong foundation for future graduate studies and research collaborations.

## Work experience

### Vacation Intern

FIT – Flextronics Institute of Technology

Jan 2023

Embedded software development for IoT, mobile development, and introductory activities in communication networks and cloud computing.

### President (Student Organization) – LUNAR

University League of Autonomous Navigation & Robotics (LUNAR)  
UNESP, Sorocaba, Brazil

2024 - 2025

Leadership and administration of the student league, applying Scrum practices to organize activities and coordinate the team.

### Competitive Robotics (Junior Level)

Brazil (OBR, FLL, LARC, RoboCup Brazil and International)

2014 - 2019

### Competitive Robotics (Major Level)

RoboCup Brazil and Robocar Race

2023 - 2025

Participation in theoretical and practical robotics competitions, developing teamwork, problem-solving, and applied engineering skills.

## Courses & Training

- Neural Networks and Deep Learning – DeepLearning.AI (Coursera), completed Feb, 2025. (Verify: K4Y4807QE05W)
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization – DeepLearning.AI (Coursera), completed Mar, 2025. (Verify: FJ8L20AYPXP8)
- AI Starter Track (40h) – FIT (Remote): Python basics; data analysis and visualization with NumPy, pandas, matplotlib, seaborn; basic AI concepts.
- AI Practitioner Track (32h) – FIT (Remote): Introduction to Machine Learning (supervised and unsupervised learning).
- IoT Communication Networks (20h) – FIT (In-person): Wi-Fi, Bluetooth, LoRa, 3G, 4G, 5G.
- IoT Applications: Development & Hands-on (20h) – FIT (In-person): Embedded IoT application development; pitch creation and presentation.
- Advanced English Program – Cultura Inglesa São Paulo (2015–2018).

AI (ML, DL, Computer Vision) 2 yrs.

MATLAB & Simulink (Control) 3 yrs.

CAD & 3D Modeling (AutoCAD, Fusion 360) 4 yrs.

Scrum & Leadership 3 yrs.

IoT Development (Wi-Fi, BT, BLE, LoRa, 3G/4G/5G) 3 yrs.

## Publications

- Castro, M. L.; da Silva, C. A. M.; Costa, D. O.; Souza, L. V.; Escalante, F. M.; Lusquino Filho, L. (2026). "A Tiny Recursive Multi-Head Model for Semantic Traffic Sign Recognition in Autonomous Robotics." Accepted (CROS 2026).
- Castro, M. L.; da Silva, C. A. M.; Morello, L. M.; Leal, F. H. G.; Lusquino Filho, L. (2025). "Selfie2Product: Hair and Product Embeddings for Multimodal Haircare Recommendation." Accepted (LAFUSION 2025).
- da Silva, C. A. M.; Camilotti, A. B.; Vergamini, E. G.; Boaventura, T.; Lusquino Filho, L.; Escalante, F. M. (2025). "Gait Phase Classification using Deep Neural Networks with Weighted Cross-Entropy Loss for handling Imbalanced Classes." Accepted (ICAR 2025).

## References

Prof. Dr. Felix Mauricio Escalante Ortega

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Prof. Dr. Leopoldo André Dutra Lusquino Filho

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7th January 2026