



## 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	Jan 2023
FIT – Flextronics Institute of Technology	
Embedded software development for IoT, mobile development, and introductory activities in communication networks and cloud computing.	
President (Student Organization) – LUNAR	2024 - 2025
University League of Autonomous Navigation & Robotics (LUNAR) UNESP, Sorocaba, Brazil	
Leadership and administration of the student league, applying Scrum practices to organize activities and coordinate the team.	
Competitive Robotics (Junior Level)	2014 - 2019
Brazil (OBR, FLL, LARC, RoboCup Brazil and International)	
Competitive Robotics (Major Level)	2023 - 2025
RoboCup Brazil and Robocar Race	
Participation in theoretical and practical robotics competitions, developing teamwork, problem-solving, and applied engineering skills.	
<h2>Courses &amp; Training</h2>	
<ul style="list-style-type: none"> <li>▪ Neural Networks and Deep Learning – DeepLearning.AI (Coursera), completed Feb, 2025. (Verify: K4Y4807QE05W)</li> <li>▪ Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization – DeepLearning.AI (Coursera), completed Mar, 2025. (Verify: FJ8L20AYPXP8)</li> <li>▪ AI Starter Track (40h) – FIT (Remote): Python basics; data analysis and visualization with NumPy, pandas, matplotlib, seaborn; basic AI concepts.</li> <li>▪ AI Practitioner Track (32h) – FIT (Remote): Introduction to Machine Learning (supervised and unsupervised learning).</li> <li>▪ IoT Communication Networks (20h) – FIT (In-person): Wi-Fi, Bluetooth, LoRa, 3G, 4G, 5G.</li> <li>▪ IoT Applications: Development &amp; Hands-on (20h) – FIT (In-person): Embedded IoT application development; pitch creation and presentation.</li> <li>▪ Advanced English Program – Cultura Inglesa São Paulo (2015–2018).</li> </ul>	

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



MATLAB & Simulink 3 yrs.  
(Control)



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

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- 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

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Prof. Dr. Felix Mauricio Escalante Ortega

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UNESP Faculty Profile

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7th January 2026

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