JOÃO MARCOS CORREIA MARQUES

+1(773)-219-7186 • jmc12@illinois.edu • joaomcm.github.io

CURRENT ADDRESS:	**PERMANENT ADDRESS:**
1010 W Clark Street, Apartment 15	SQNW 109 Bloco A ap. 618
Urbana, IL, 61801	Brasília, DF, 70686405
United States of America	Brazil

OBJECTIVE

To engage in a summer research internship in autonomy and robotics

EDUCATION

Expected August 2024

University of Illinois at Urbana-Champaign, Grainger School of Engineering, Urbana-Champaign, Il, USA
PhD Candidate in Computer Science
Advisor: Kris Hauser, GPA: 3.96/4.0

August 2015 – December 2017

Politecnico di Milano, Scuola Di Ingegneria Industriale e dell'Informazione, Milano,Mi,Italy
Double Degree student from the University of São Paulo, M.Sc. - Automation and Control Engineering
Thesis: "A point-and-command interface for grasping unknown objects with robotic manipulators"
Voto di Laurea: 109/110

January 2011 – December 2018

University of Sao Paulo, Polytechnic School, Sao Paulo, SP, Brazil
Major: Mechatronic Engineering (Robotics), GPA (uncurved): 8.2/10

RECENT EXPERIENCE

August 2019 – July 2021 and January 2022 - Present

University of Illinois at Urbana-Champaign (Intelligent Motion Laboratory), Urbana-Champaign, Il, USA
Graduate Research Assistant under Professor Kris Hauser, 20 hours of weekly dedication

- Leader of the Human-Robot Interaction Team in the TRINA 2.0 project, earning 4th place in the ANA Avatar XPrize as the AVATRINA Team. Responsible for integrating haptic sensing, rendering and vision, as well as managing computer infrastructure and investigating ergonomics and usability.
- Studied optimal path planning for the automated UV disinfection of indoor environments and planning for object instance retrieval in indoor environments. Currently studying uncertainty estimation in 3D mapping in the context of domestic robots performing object retrieval.

August 2021 – December 2021

University of Illinois at Urbana-Champaign, Urbana-Champaign, Il, USA
Teaching Assistant – CS440 under Professor Margaret Fleck, 20 hours of weekly dedication

- Created homework assignments and autograders and graded exams. Administered weekly T.A. hours

July 2018 – April 2019

Epistemic, São Paulo, SP, Brazil
Data Science Intern, 30 hours of weekly dedication

- Responsible for improving an early-warning system for the detection of epileptic seizures. Improved model sensitivity by 15%, while reducing false positive rates by 25%.

August 2017 – April 2018

Big Data Brasil, São Paulo, SP, Brazil
Data Science Intern, 30 hours of weekly dedication

- Responsible for creating and maintaining webcrawlers, developing predictive models using neural networks and developing an automatic auditing system for a hospital, which resulted in up to R$ 2 million in yearly savings

SKILLS

Python (advanced); Klamp't (intermediary); Solidworks (intermediary); Unity and C# (beginner)

RECENT PUBLICATIONS AND PATENTS

- Qiu, R., Sun, Y., **Marques J. M. C.**, Hauser, K., "Real-time Semantic 3D Reconstruction for High-Touch Surface Recognition for Robotic Disinfection", in 2022 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS)
- **Marques, J. M. C.,** R. Ramalingam, Z. Pan and K. Hauser, "Optimized Coverage Planning for UV Surface Disinfection," 2021 IEEE International Conference on Robotics and Automation (ICRA), 2021, pp. 9731-9737
- (pending) Hauser, K, **Marques, J M. C.**, Pan, Z. "A Targeted Approach for Utraviolet Disinfection of Surfaces". US Patent Appl. No. 17/085,416, filed October 30, 2020.
- **Marques, J. M. C.**, F. Gagliardi Cozman and I. Ferreira dos Santos "Automatic Summarization of Technical Documents in the Oil and Gas Industry", in *2019 8th Brazilian Conference on Intelligent Systems (BRACIS)*, Salvador, Brazil, 2019 pp. 431-436

AWARDS & ACHIEVEMENTS

2022	4th place finish in the ANA Avatar XPRIZE competition, Long Beach, CA – with team AVATRINA.
2021	Best Robotics Demonstration at the 16th CSL Student Conference – with Intelligent Motion Laboratory
2020	Best Robotics Demonstration at the 15th CSL Student Conference – with Intelligent Motion Laboratory