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Personal Profile

As a Master's student in Modern Chinese Studies with a specialization in Chinese Philosophy, I am currently conducting advanced research in the field of **Philosophy of Technology**. My thesis, titled "**The Use of Beauty Filters on Chinese Social Media and Their Influence on Perceptions of Beauty**," investigates the ethical and aesthetic implications of digital mediation on human perception. Grounded in a rigorous academic background in Biosystems Engineering, I bring a unique interdisciplinary perspective that bridges technical understanding with critical philosophical inquiry. I am committed to academic excellence, having been recognized with the Academic Excellence Award with First Class Honors and various scholarships. I seek to further my research at the intersection of technology, culture, and ethics, contributing to a deeper understanding of human-technology relations in a global context.

Education

Shanghai Jiao Tong University: Master's in Modern Chinese Studies **Sep 2024 - June 2026**

Notes:

- Research Focus: Philosophy of Technology, Digital Aesthetics, and Ethics.

Sao Paulo State University: Bachelor's of Biosystems Engineering **Feb 2017 - Dec 2022**

Notes:

- Conducted a Systematic Literature Review on the Use of Sensors in Air Intake for Diesel Engines as part of my undergraduate thesis, which resulted in a publication on the subject.
- During my undergraduate studies, I had the opportunity to enroll in a graduate-level course on Intelligent Systems, where I consistently demonstrated excellence. This experience provided me with the opportunity to interact with master's students and professionals in the field, allowing me to gain valuable insights into scientific methodology.
- During the graduation ceremony, I was honored with the award for top-performing student, recognizing my exceptional academic achievement among my peers.

Work Experience

Teaching Assistant (TA) – C.A.R.E. Project *Shanghai Jiao Tong University* **Current**

Notes: Serving as a Teaching Assistant for the **C.A.R.E. Project (Collaborative Online International Learning): An Intercultural Exploration of Care, AI, and Robotic Ethics in a Global Context**. I assist my supervisor in facilitating cross-cultural dialogue and research on the ethical dimensions of artificial intelligence and robotics, bridging technical concepts with philosophical inquiry.

Online Private English Teacher **2019 - 2021**

Teaching English Online as a Second Language for Brazilian and Chinese students.

Online Mandarin Teacher **Pula Muralha, 2021**

Teaching Brazilians Portuguese native speakers Chinese Language, from levels HSK1 to HSK3.

English Teacher**School I See You, Wuhan, China, Mar 2024 - June 2024**

Joined Activities in which I used to teach Chinese students English. These activities used to happen in parks, zoos, or supermarkets where I taught kids how to use the language in everyday dialogues. The kids needed to complete some missions in these scenarios and try to use the words they had earned during the warm-up activity and class.

English Teacher**Hubei University, China - Nov 2023 - Dec 2023**

Joined the English Corner, which is a group activity for Chinese students, providing them with the opportunity to discuss various topics in English with international students. In these conversation classes, my role was to encourage students from Hubei University to express themselves in English. The selection of teachers involved a competitive selection process in which I was one of the chosen candidates.

English Teacher**Sao Paulo State University, Brazil - Mar - Dec 2022**

Selected for a scholarship to participate in a university extension project, where I taught a preparatory English course to high school students who were preparing to take admission exams for Brazilian universities but lacked the financial means to afford preparatory courses.

Math Teacher**Sao Paulo State University, Brazil - Mar 2017 - Mar 2018**

Selected for a university extension project after a competitive selection process to teach mathematics classes to students from public schools. I provided classes to both high school and undergraduate students who faced challenges in learning mathematics, aiming to conduct scientific research for the development of methodologies that better catered to the needs of these students.

Office Administrative**São Paulo State Government, Brazil - Oct 2014 - Feb 2016**

Selected through a public competition to work as a civil servant in the government of the state of São Paulo, where I served as an administrative officer. In this role, I was responsible for administrative and judicial processes related to inmates in a semi-open regime. Through this experience, I gained valuable skills in research and information investigation, which proved invaluable in various aspects of my university education, particularly in research and problem-solving.

ESL Teacher**Wizard Language School, Tupã, SP, Brazil Feb 2012 - Oct 2014**

At the age of 18, I had my first professional experience as an English teacher at a language school, where I learned a great deal about communication, teamwork, and meeting goals. This valuable knowledge I gained before entering academia made a significant difference, as I found myself more mature than my peers who had just graduated from school.

Volunteering ExperienceBiosystems Engineering Department:

Differential and Integral Calculus II tutor
 Differential and Integral Calculus I tutor
 Differential and Integral Calculus II tutor
 Differential and Integral Calculus II tutor

August - December 2017
 March - July 2018
 August - December 2018
 August - December 2020

Administration Department:

Mathematics I tutor

August - December 2022

Research Experience**Mathematics Teaching Laboratory****Feb 2017 - Feb 2018**

Notes:

- University extension project aimed at offering mathematics reinforcement classes to both high school and undergraduate students who struggle with learning the subject, free of charge. The course was not only open to students but also to any community members interested in learning mathematics.
- In addition to classes, the project also provided reinforcement sessions for students, with tutors available on demand. These tutors and instructors were undergraduate students majoring in either business administration or engineering.
- Participating students also had the opportunity to make use of computer and physics laboratories within the academic environment to provide better tools for enhancing their learning experience.
- It was possible to apply and analyze different methodologies for teaching mathematics to these students, and thus, through research, to better understand the factors influencing the gap in mathematics education in Brazilian schools.

Use of Python for Analytical Modeling of Magnetorheological Materials, CAPES Agency **2018**

Notes:

Developed mathematical equation models using Python to simulate the application of magnetorheological materials in building structures, specifically focusing on vibration control and structural dynamics analysis.

Use of Recycle Materials to Build Solar Energy Station, Sao Paulo State University **July - Dec 2018**

Notes:

Developed an academic extension project aimed at bridging the gap between the university and the local community through the construction of a solar energy station using recyclable materials. The initiative focused on promoting sustainable engineering practices and community engagement. However, the project was discontinued due to the cancellation of scholarship funding.

Application of Arduino Programming Automation in SCADA System **July - Dec 2019**

Notes:

Designed and constructed an automated conveyor belt system as a practical project for the "Fundamentals of Automation" course. The system integrated Arduino programming with a SCADA interface and utilized an optical sensor for real-time bottle detection to trigger an automated liquid filling process, demonstrating the practical application of industrial automation principles.

4.0 Technology in Dust Explosion Monitoring of Sugar Production **July 2020 - Dec 2021**

Notes:

This research was conducted over three semesters and with the same group of students from Engineering courses, in a guided interdisciplinary work discipline. It was an opportunity to learn more about the research process from creating the research project to finalizing the final report.

- First Semester: A specific production chain was chosen, in this case, that of sugarcane, and a research project was developed to understand all stages of the chain, as well as the types of bottlenecks that this chain still faces at various stages, and the consequences for production and distribution logistics that these issues could cause.
- Second Semester: The next step was to choose which issue would be addressed and what proposals for solutions would be intelligent, cost-effective, and environmentally sustainable. The issue identified was the occurrence of explosions caused by the accumulation of fine materials, such as dust due to sugar production. The solution was the creation of a sensor-based system.
- Third Semester: A system aligned with Industry 4.0 technology was envisioned for the implementation of sensing capable of predicting and alerting to the occurrence of these explosions caused by dust.

Statistical Tools in Academic Achievement of Higher Education Students **Mar - Dec 2021**

Notes:

- Due to the high number of Brazilian university freshmen showing significant deficiencies in basic sciences such as math, an investigation was conducted to assess whether admission exams were selecting candidates truly suited for higher education.
- It was discovered that the cutoff scores were very low, especially for courses with lower competition but still demanding a high level of student knowledge.
- Through mathematical modeling, it was possible to assess the extent to which students were answering questions correctly versus guessing, revealing that many students were merely guessing based on probability rules.
- Proposed solutions include raising cutoff scores and question difficulty levels. For incoming university students with knowledge gaps, implementing projects to address their needs would ensure they can meet the demands of higher education without difficulty.

Systematic Literature Review of Use of Industrial Instrumentation in Cotton Cultivation **2021**

Notes:

- A systematic literature review was conducted to understand the types of instrumentation (sensors) that have been used in the control of cotton production, which is an important sector of agricultural production.
- Understanding the main bottlenecks that cotton production still faces.
- What are the applications of technology present in production and also the knowledge gaps for possible future academic research.

Application of Compound Culture in Treatment of Aquaculture Wastewater **Aug - Dec 2021**

Notes:

Developed a research proposal for a "smart farm" system applying compound cultures to treat aquaculture wastewater, designed to be integrated with Artificial Intelligence for automated monitoring and control. However, due to the restrictions imposed by the COVID-19 pandemic, the project remained at the conceptual design stage and could not be implemented in the field.

A Survey of High School Students' Performance Employing Technological Tools **2022**

Notes:

- An investigation was conducted with students participating in a university extension project at the university, which offers free classes as a preparatory course for university entrance exams for low-income students, to better understand the needs of these students regarding their learning process before entering academic life.
- As a continuation of the previous research, during this study, a series of teaching methodologies, mainly technology for assessing their impact on student learning, were put into practice. Thus, attempting to find solutions, and even understand the main difficulties students face when studying.

Diagnosis of Basic Mathematics Learning in Brazilian Public Education System **Dec 2022**

Academic internship conducted on campus aimed to investigate the variables responsible for the lag in mathematics education in Brazilian schools, mapping the main causes to be investigated with students and teachers from the public education system.

Systematic Literature Review of the Use of Sensors in Air Intake for Diesel Engines **2022**

Notes:

- The use of agricultural machinery in agricultural production is crucial for plowing, harvesting, and implementing agricultural implements. However, many of these machines operate on diesel engines, and because they are in constant contact with the soil, they experience air intake problems due to solid residues hindering engine lubrication. This leads to frequent maintenance needs and even the purchase of new machinery, resulting in production delays and significant financial losses due to the high costs involved.

- To address this issue, a sensor-based filtration system was proposed to prevent the entry of solid residues and dust into the air intake of the engines. However, implementing the project required a systematic literature review to investigate previous studies addressing this problem and the solutions discussed in scientific literature.

Scholarships and Awards

Financial Aid Scholarship, Sao Paulo State University	2017	
Mathematics Teaching Laboratory, Office of Extension, Sao Paulo State University	2017	
Use of Python for Analytical Modeling of Magnetorheological Materials, CAPES Agency	2018	
Use of Recycled Materials to Build Solar Energy Station, CAPES Agency	2018	
Financial Aid Scholarship, Sao Paulo State University	2018	
Statistical Tools in Academic Achievement of Higher Education Students	2021	
Use of Sensors in Air Intake for Diesel Engines, CAPES Agency	2021	
A Survey of High School Students' Performance using Technological Tools, Office of Extension, Paulo State University	2022	Sao
Diagnosis of Basic Mathematics Learning in Brazilian Public Education System	2022	
Academic Excellence Award for Outstanding Performance with First Class Honors	2022	
Shanghai Jiao Tong University, Master's Degree SJTU Scholarship	2024	

Academic Internship

Diagnosis of Basic Mathematics Learning in Brazilian Public Education System Dec 2022

Notes:

- Investigated the causes of the significant gap in mathematics education and the lack of proficiency in basic mathematics among Brazilian high school students and incoming college students, aiming to prevent low-quality higher education and subsequent low academic performance by the students.

The investigated variables included:

- High gap in mathematics education.
- Low quality of education in schools.
- Lack of interest from students.
- Decline in the quality of scientific research conducted by higher education students.

Publications

Articles:

Aranha, T., Batista, N., Rodrigueiro, M., Neto, M., Oliveira, K. S., Morais, F., & Santos, P. (2023). **Use of sensors in air intake in internal combustion engines: A systematic review of the literature**. DOI: 10.56238/Connexpemultidisdevolpfit-027.

Batista, N., Aranha, T., Oliveira, K. S., Rodrigueiro, M., Neto, M., & Santos, P. (2022). **Aplicação de instrumentação em cultivo de algodão: revisão sistemática da literatura.** *Research, Society and Development*, 11, e46511930581. DOI: 10.33448/rsd-v11i9.30581.

Chapters:

Aranha, Thiago; Batista, Natalia; Rodrigueiro, Mariana; Neto, M.; Oliveira, Kassandra, Sussi; Moraes, Flávio; Santos, Paulo. (2023). "Use of Sensors in Air Intake in Internal Combustion Engines." In: *Seven Publicações Acadêmicas*, Chapter 27. DOI: 10.56238/Connexpemultidisdevoipfut-027.

Batista, N., Aranha, T., Oliveira, K. S., Rodrigueiro, M., Neto, M., & Santos, P. (2022). "Application of instrumentation in cotton cultivation: a systematic literature review." In: *Themes Focused on Interdisciplinarity and Sustainable Development Worldwide, Vol. 01*, Chapter 19. DOI: 10.56238/tfisdwv1-019.

Batista, N., Aranha, T., Oliveira, K. S., Rodrigueiro, M., Neto, M., & Santos, P. (2022). "Application of instrumentation in cotton cultivation: a systematic literature review." In: *Themes Focused on Interdisciplinarity and Sustainable Development Worldwide, Vol. 01*, Chapter 71. DOI: 10.56238/tfisdwv1-071.

Conferences Presentations and Posters

XXXI Congress of Scientific Initiation, São Paulo State University **2019**
Presented my work related to the use of Python for Analytical Modeling of Magnetorheological Materials.

XXXIII Congress of Scientific Initiation, São Paulo State University **2021**
Presented my work on a systematic literature review on the use of sensors in the air intake system of internal combustion engines.

International Academic Exchange

Universidad Veracruzana, Mexico **Oct - Dec 2019**
Course in Agricultural Machinery and Implements, taken as part of a virtual exchange program (Brave Program), in partnership with the Materials Selection course with students from Universidad Veracruzana, Mexico. Work conducted with Mexican students in collaboration with Brazilian students, awarded as the best joint project, overcoming language barriers between teams.

Extracurricular Activities

Shanghai Jiao Tong University **Apr 2025 - Apr 2026**
Appointed as a member of the management service team for the International Student Service Center. Responsible for supporting university management services and assisting the international student community.

Hubei University, China **Sep 2023 - June 2024**
Selected for the one-year Confucius Institute Scholarship for Chinese Language Teaching program, studying at Hubei University in Wuhan, China, where I also had the opportunity to work at the English Corner project..

Universidad Católica Del Norte, Chile **July - Dec 2022**
Recipient of the Survival Spanish scholarship program offered by Universidad Católica del Norte, Chile, in partnership with UNESP, for a six-month virtual Spanish language study program.

Shanghai Jiao Tong University, China **Feb - June 2021**

Selected for a Confucius Institute scholarship program in Chinese Language and Literature through an internal selection process at Shanghai Jiao Tong University during the pandemic period. The program consisted of six months of online Chinese language studies. Achieved approval based on proficiency test performance in the Chinese language.

Hubei University, China

Jan 2021

Completed the 2021 Chinese Bridge Virtual Exchange Program 'Journey of Intangible Cultural Heritage, Wudang, of Traditional Chinese Philosophy,' organized by Hubei University in January. The program consisted of 55 hours of study. Delivered a speech in Chinese representing Brazilian students at the closing ceremony of the program.

Additional Courses

Systematic Review and Meta-Analysis

University of Campinas (Unicamp), 2021

This course has provided valuable insights into the techniques of systematic review and meta-analysis, enabling proficient evaluation and synthesis of scientific evidence.

Introduction to Python

São Paulo University (USP), 2021

Artificial Intelligence Foundations: Machine Learning

LinkedIn, 2025

References

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