Gustavo Raí Malacarne

Florianópolis, Santa Catarina - Brazil

✉ gustavomalacarne.r@gmail.com | 📱 +55 45 998291381 | in [gustavo-malacarne](#)

Web Developer | AI Researcher | Data Analyst
SPRING BOOT · NODE JS · FRONTEND · RECOMMENDATION SYSTEMS
PYTHON · MACHINE LEARNING · DATA MANIPULATION AND ANALYSIS

Summary

I'm a master's in applied computing and I have developed a Recommendation System using Java Spring Boot for an e-learning company over the past three years, aiming to provide a better learning experience for students. My passion for technology and education is demonstrated through my experience in various technology sectors. I hold a degree in Internet Systems Technology, where I delved into Web Development, learning technologies such as HTML, CSS, and JavaScript for the Frontend, and Node JS, Ruby on Rails, and PHP Laravel for the Backend. In the Web Security field, I gained experience in Cyber Defense, which was my research project for my undergraduate thesis.

With over five years of experience as a Programming Instructor, I have continuously evolved my teaching strategies to convey knowledge in Web Development and various Frameworks to a diverse student base. My expertise also extends to mentoring young people aged 8 and up in Game Development, Robotics, and IoT, showcasing my versatility and dedication to fostering technological skills from an early age.

Throughout my experiences, particularly during my master's studies, I honed strong analytical skills, applying advanced statistical processes through Mathematical Methods in Computing. As a Software Engineer, I have worked extensively on optimizing software performance and utilizing the R programming language to perform data analysis. In addition, I applied deep learning methods using Keras and TensorFlow, enabling me to tackle complex tasks such as neural network modeling and predictive analytics. My expertise also extends to data manipulation, where I leveraged Pandas and NumPy for efficient data processing and analysis. Furthermore, I employed machine learning techniques using scikit-learn and TensorFlow, allowing me to implement and fine-tune various algorithms for predictive modeling and classification tasks.

Educational Background – Completed Postgraduate

Specialization in Artificial Intelligence
Federal Technological University of Paraná (UTFPR)
11/2024 – Ongoing

Master's degree in Computer Science
Western Paraná State University (UNIOESTE)
07/2021 - 02/2024

Bachelor's Degree in Internet Systems Technology
Federal Technological University of Paraná (UTFPR)
03/2017 - 06/2021

Professional Experience

Programming Instructor – Superprof   08/2020 – Present

Main Responsibilities:
- Web Development Instructor:
    - HTML, CSS, JavaScript
    - Responsive and interactive websites
    - Frontend Frameworks: Bootstrap, Tailwind
- Systems Developer:
    - Node JS, Java Spring Boot, React JS, Ruby on Rails, PHP Laravel
    - Scalable and high-performance web applications
    - RESTful APIs
- Robotics and IoT Programming Instructor:
    - Robotics programming and Internet of Things (IoT) with Arduino
- Digital Game Developer:
    - LUA with Roblox Studio, C# with Unity
    - Game design

Key Achievements:
- Over 60 students instructed over four years, with a significant impact on the formation of new IT professionals.
- 35% of students graduated in the field of Information Technology through mentorship and teaching.
- 20% of students acquired programming logic skills in elementary school, preparing them for future academic and professional challenges.
- A student group from more than 8 different countries.
- Received a maximum rating of 5 stars, reflecting the quality of teaching.

Software Engineer - Western Paraná State University   07/2021 - 03/2024

Main Responsibilities:

- Developed and enhanced recommendation systems for educational purposes using Java Spring Boot.
- Developed RESTful APIs and managed projects with Apache Maven.
- Applied advanced statistical methods and used the R programming language.
- Applied deep learning methods with Keras and TensorFlow
- Data manipulation with Pandas and NumPy
- Machine learning techniques with scikit-learn and TensorFlow
- Integrated different languages and used Docker containers.
- Frontend development and interface design using HTML, CSS, JavaScript, and Bootstrap.
- Expertise in software architecture and database management (MySQL, Postgres, MongoDB).
- Managed the software development lifecycle, including requirements gathering, quality testing, and end-user support.
- Collaborated with multidisciplinary teams for process optimization and product improvements.

Key Achievements:
- Complete development of the recommendation system in 2 years, improving learning personalization for over 100 students.
- Reduced API development time by 40% through the implementation of project management tools.

- Increased student engagement by 35%, resulting in a positive rating of 93%.

Programming and Robotics Instructor - Mineweb and Harbor Bilingual School   10/2018 – 08/2021

Main Responsibilities:

- Programming and Algorithms Instructor:
  - Programming in C and Java languages
  - Programming logic
  - Algorithms with Portugol
  - Logical thinking
- Educational Robotics Instructor:
  - Practical courses with robotics kits from Lego, Vex, and Arduino
  - Principles of engineering, programming, and design
  - Teaching concepts of mechanics, electronics, and programming
  - Development of projects and technological solutions
- Digital Game Developer:
  - Game development using the LUA language
  - Interactive game environments
  - Game design
  - Problem-solving
- Internet of Things (IoT) Specialist:
  - Connected devices
  - Daily interactions
  - Creation of practical projects demonstrating the potential of IoT in transforming home, industrial, and urban environments
- Researcher in Entrepreneurship and Technological Innovation:
  - Analysis of how technological innovations can be transformed into sustainable business opportunities
  - Understanding challenges and strategies for success in tech startups

Key Achievements:
- Over 4 Technology and Innovation fairs presented by the students.
- Introduction to programming logic and robotics for students as young as 6 years old.
- Mentored two teams for the FIRST LEGO League.

Cyber Defense Researcher - Itaipu Technology Park (PTI)   06/2018 – 05/2020

Main Responsibilities:

- Contributions to Cyber Defense:
  - Development and implementation of the Lasec² work plan
  - Cyber defense methods
  - Increasing system resilience to digital threats
- Research and Development in SCADA System Security:
  - Identify and mitigate cyberattack vectors in SCADA systems
  - Studies to protect critical infrastructures
  - Studies on methods that enhance SCADA system security
  - Development and publication of literature reviews
  - Practical testing of security methods to validate the effectiveness of protection strategies for SCADA systems
- Research and Evaluation of Web Security:

- o   Investigation of methods and tools capable of mitigating vulnerabilities listed in the OWASP TOP 10
- o   Studies to strengthen web application security
- o   Testing of security tools for code scanning
- o   Application of ethical hacking measures
- o   Development and publication of systematic reviews on tools and methods for secure development
- Use of Virtual Machines:
  - o   Use of virtual machines as controlled environments to simulate attacks, test security measures, and validate solution effectiveness
  - o   Linux systems

Key Achievements:

- Two papers published for PTI.
- Identification of over 10 tools used to mitigate attacks from the OWASP TOP 10 list.
- Creation of a document summarizing the main cyberattacks on SCADA systems.
- 83% success rate in identifying attack vectors in simulations.

Skills

- Web Development: HTML, CSS, JavaScript, Node JS, Ruby on Rails, PHP Laravel, React JS
- Frontend Frameworks: Bootstrap, Tailwind
- Deep Learning: Keras, TensorFlow
- Data Manipulation: Pandas, NumPy
- Machine Learning Techniques: scikit-learn, TensorFlow
- Systems Development: Java Spring Boot, RESTful API
- Web Security: Cyber Defense, SCADA System Security
- Digital Games: LUA, Roblox Studio, C# with Unity
- Robotics and IoT: Arduino
- Mathematical Methods in Computing: Statistical processes, R language
- Data Structures: Trees and Graphs, Sorting Algorithms, Recursive Codes
- Databases: MySQL, Postgres, MongoDB
- Tools and Technologies: Docker, Apache Maven, Git

Projects

- Available at: [Online Portfolio](#)

Languages

- Portuguese: Native
- English: Advanced
- Spanish: Advanced