Rafael Henrique de Oliveira **Carvalho**

MECHATRONICS ENGINEER DATA ANALYST DATA ENGINEER AND MASTER'S DEGREE IN COMPUTER SCIENCE

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Goals

My primary objective is to work in the fields of data engineering and data science, leveraging the knowledge and skills I have gained throughout my academic and professional journey to deliver innovative and impactful solutions. I seek a professional environment that promotes collaboration, continuous learning, and new challenges. I am highly motivated to expand my expertise while making meaningful contributions to impactful projects.

Education

PUC Minas   *Remote*

POSTGRADUATE DEGREE IN PROGRESS   *Mar. 2024 - Inprogress*

- Artificial Intelligence and Machine Learning

Universidade Federal de Uberlândia   *Uberlândia, Brasil*

MASTER'S DEGREE   *Aug. 2021 - Jul. 2024*

- Computer Science with an Emphasis in Data Science and Computer Vision.

Universidade Federal de Uberlândia   *Uberlândia, Brasil*

BACHELOR'S DEGREE   *Aug. 2015 - jul. 2021*

- Mechatronics Engineering.

Experiences

Cargill Agrícola SA   *Uberlândia, Brasil*

ADVANCED ANALYTICS ENGINEER   *Oct 2023 - Dez 2024*

- Focus on delivering digital solutions for business needs.
- Build data pipelines from different sources (ERP, APIs, Impala) to deliver curated data to end users, enabling them to build reports and perform analytics.
- Provide guidance on the company's data, including how to consume it and best practices when working with it.
- Use AVEVA PI System tools combined with Python to build integrated products that add value and replace non-value-adding activities.
- Apply advanced analytics techniques to enhance value and optimize manufacturing processes.

Cargill Agrícola SA   *Uberlândia, Brasil*

ASSET TWIN ANALYST   *Jul. 2021 - Oct 2023*

- Focus on creating a Digital Twin to facilitate data exploration and the creation of digital products.
- Use of AVEVA PI System tools combined with Python to build the asset tree and data availability in a cloud environment.
- Definition and standardization of Kpis calculations integrated with Digital Twin.
- Support development of BI tools and Data Science Products.

Cargill Agrícola SA   *Uberlândia, Brasil*

INTERNSHIP IN MAINTENANCE AND RELIABILITY   *Aug. 2020 - Jul. 2021*

- Internship focused on maintenance and reliability, with the objective of proccess digitalization.
- Use of office 365 tools: Power BI, Power Automate and Power Apps for the development of digital solutions.
- Use of Scrum methodology.

Universidade Federal de Uberlândia   *Uberlândia, Brasil*

WAVELET-BASED ALGORITHMS AND ENTROPIES FOR ANALYSIS OF ORAL CAVITY HISTOLOGICAL IMAGES   *Aug. 2019 - Aug. 2020*

- Scientific Initiation Project with PIBIC funding offered by CNPq.
- Project with main objective the development of a computational system based on Entropy for classification of oral cavity cancer images.
- Use of knowledge from the image analysis area with texture-based feature extraction.
- Models with classification with Random Forests and feature selection with ReliefF.
- Developed with Matlab and WEKA.

Universidade Federal de Uberlândia *Uberlândia, Brasil*

Investigating Entropy in Histological Breast Tissue Classification *Aug. 2018 - Jul. 2019*

- Scientific Initiation Project with PIBIC funding offered by CNPq.
- Project with the main objective of developing a computational methodology based on Entropy for classification of breast cancer histological images.
- Use of knowledge from the image analysis area with feature extraction based on texture and Wavelet transform.
- Application of Genetic Algorithm to define the best parameters for the feature extraction.
- Models with classification with Random Forests and feature selection with ReliefF.
- Developed with Matlab and WEKA.

Languages

Native Portuguese | Advanced English | Basic Spanish | Basic German | Basic French

Skills

Programming languages

- Python
- Matlab
- Latex
- SQL
- AVEVA PI

Softwares

- AVEVA PI
- SEEQ
- Knime
- Power Plataform: Power BI, Power Apps, Power Automate
- Matlab
- Microsoft Office 365

Capacities

Soft Skills

- **Strategic Thinking** - Focused on aligning activities and decisions with expected objectives, always considering long-term impact;
- **Problem Solving** - Analytical approach to identify the best solution for complex problems, delivering effective and sustainable results;
- **Continuous Learning** - Constant interest in learning new technologies and best practices, aiming for professional growth and acquiring new skills;
- **Communication** - Ability to explain technical concepts in a simple way for non-technical teams;
- **Adaptability** - Flexibility to handle changes and overcome new challenges, maintaining an optimistic and proactive attitude;
- **Collaboration and Teamwork** - Collaborating effectively with data scientists, analysts, engineers, and stakeholders, fostering conflict resolution and aligning expectations to ensure project success;
- **Results-Oriented** - Commitment to project success through a goal-driven and performance-focused approach.

Extracurricular activities

XIX Week of the Faculty of Mechanical Engineering *Uberlândia, Brasil*

Participant *set. 2018*

- Lectures on Mechanical Engineering aimed at the job market and Industry 4.0.
- class about IoT(Internet of Things).

XIII Theses and Dissertations Workshop in Computer Science *Uberlândia, Brasil*

Presenter *jul. 2019*

- Event whose objective was to encourage the search for knowledge, explain technological trends, present the job market in the field of Computer Science.
- Work Presentation about the scientific initiation project: Investigating Entropy in the Classification of Histological Breast Tissues

References

Prof Dr. Marcelo Zanchetta do Nascimento - marcelo.nascimento@ufu.br

Klayton Araújo - klayton.feis@gmail.com

Cesar Santos - cesarmect@gmail.com