Portfólio

Projetos de Análise e Visualização de Informação

Portfólio de
Bárbara Pedrosa

maio de 2025

Projetos

DEEP LEARNING AND COMPUTER VISION
(PÓS-GRADUAÇÃO, 2025)

NATURAL LANGUAGE PROCESSING
(PÓS-GRADUAÇÃO, 2025)

EDA & MML
(PÓS-GRADUAÇÃO, 2025)

AI COOKBOOK
(E-BOOK, 2024)

PITCH JUNIFEUP
(CANDIDATURAS 2021 E 2022)

EUFA CHAMPIONS LEAGUE
(TRABALHO SQL, 2020)

Notebooks e outros materiais disponíveis no github

Trabalho da pós-graduação

Deep learning and Computer Vision

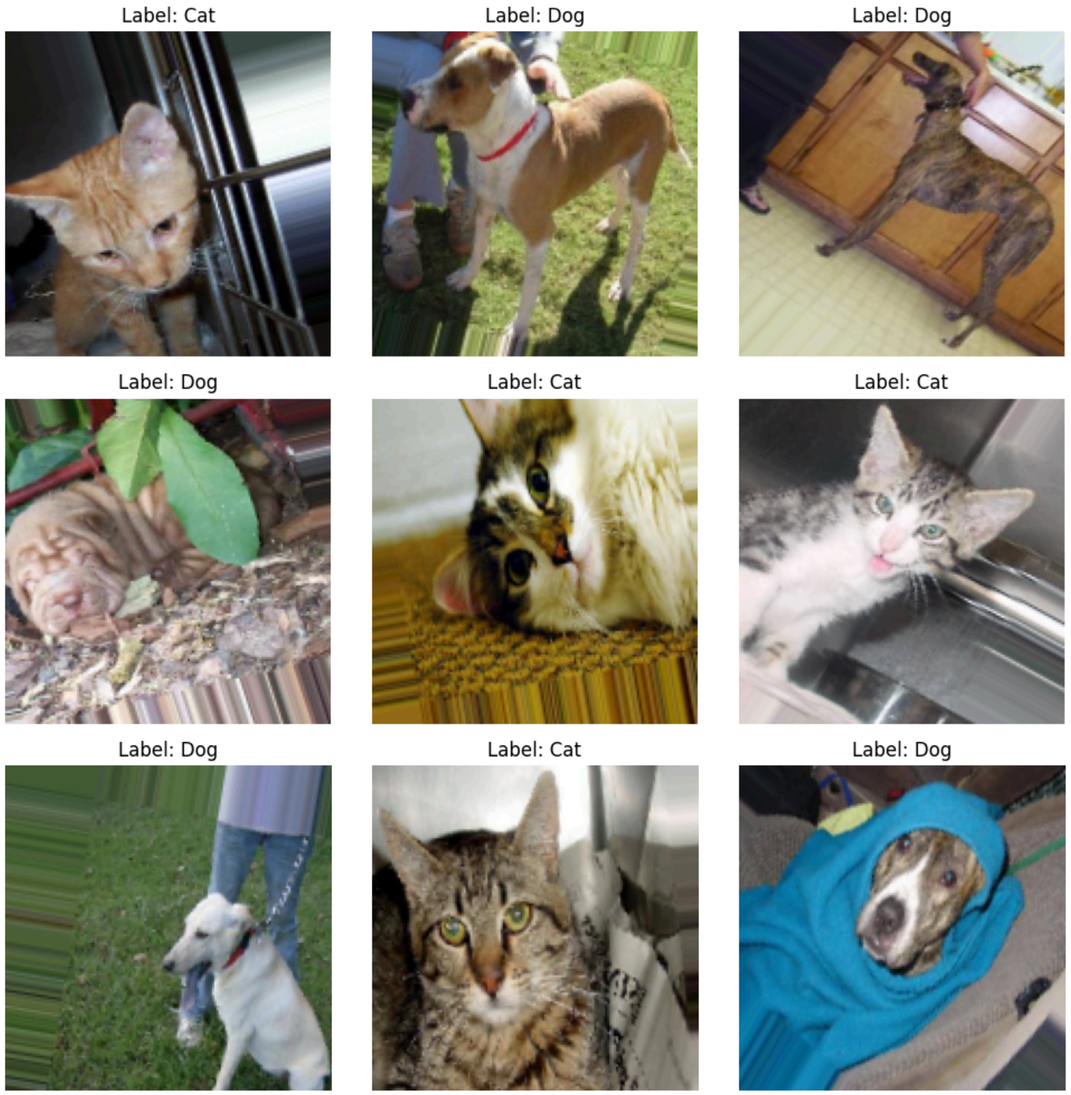
```
Ficheiro ZIP extraído com sucesso!
Diretórios definidos com sucesso!
dataset/
    dataset_test/
        cats/
        dogs/
    dataset_train/
        cats/
        dogs/
```

O trabalho de DLVC consistiu num classificador binário capaz de distinguir imagens de cães e gatos. Para tal, foram construídos e avaliados 3 arquiteturas distintas.

- Construir e treinar modelos deep learning de raíz;
- Construir e treinar modelos deep learning pré-treinados;
- Avaliar e afinar as várias arquiteturas;
- Visualizar as previsões e identificar os erros de classificação.

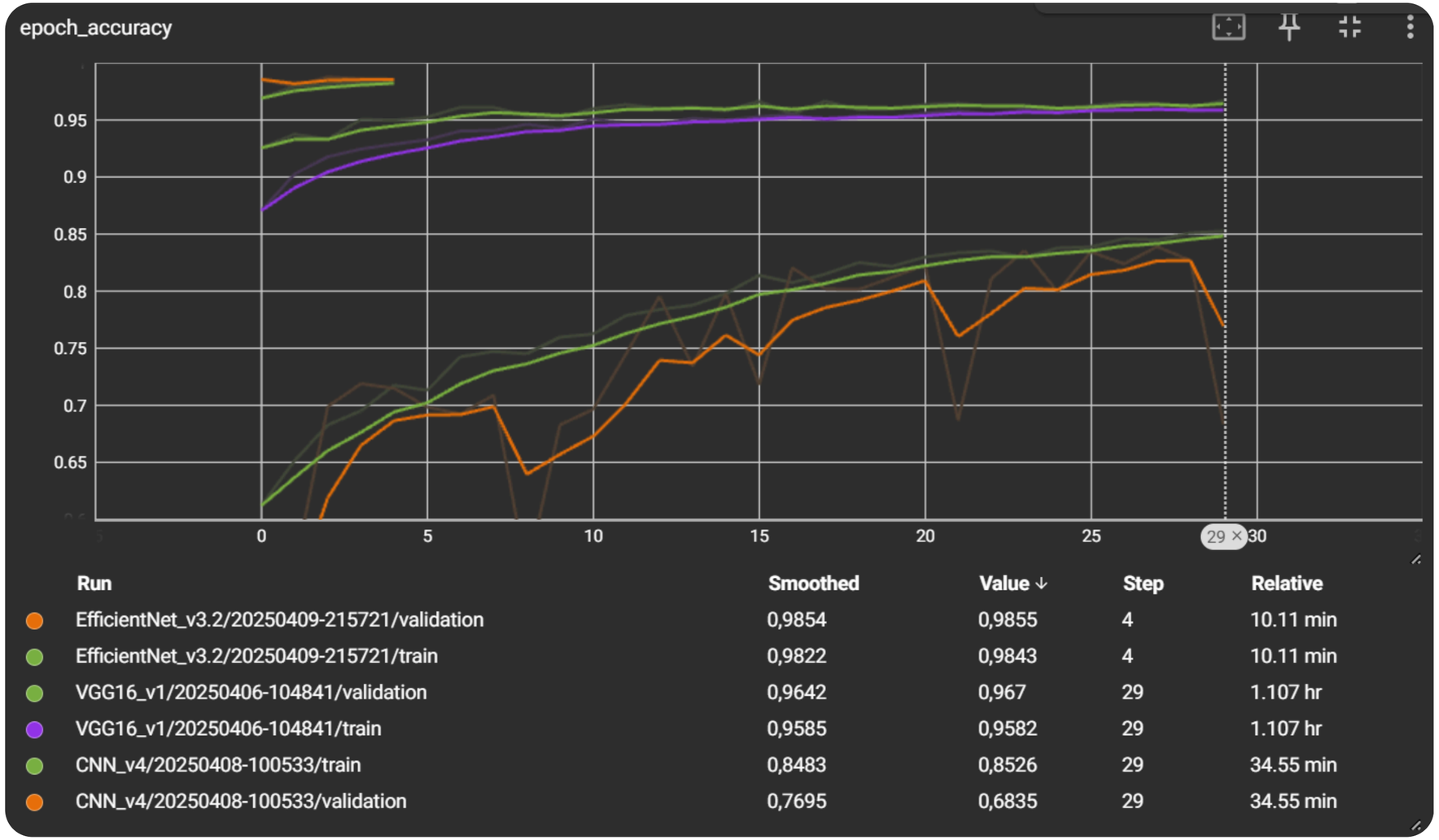
Ligação para o notebook.

março – abril de 2025



imagens geradas e ajustadas com ImageDataGenerator

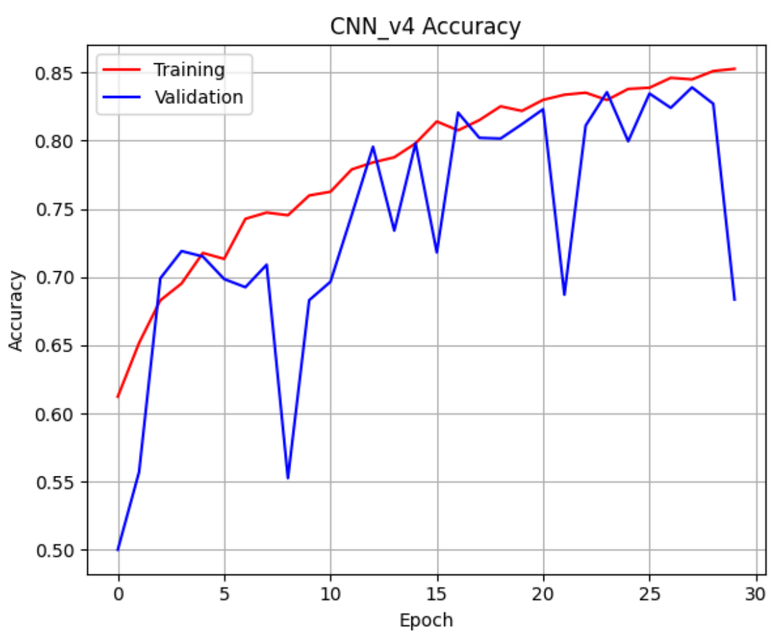
nota final: 20

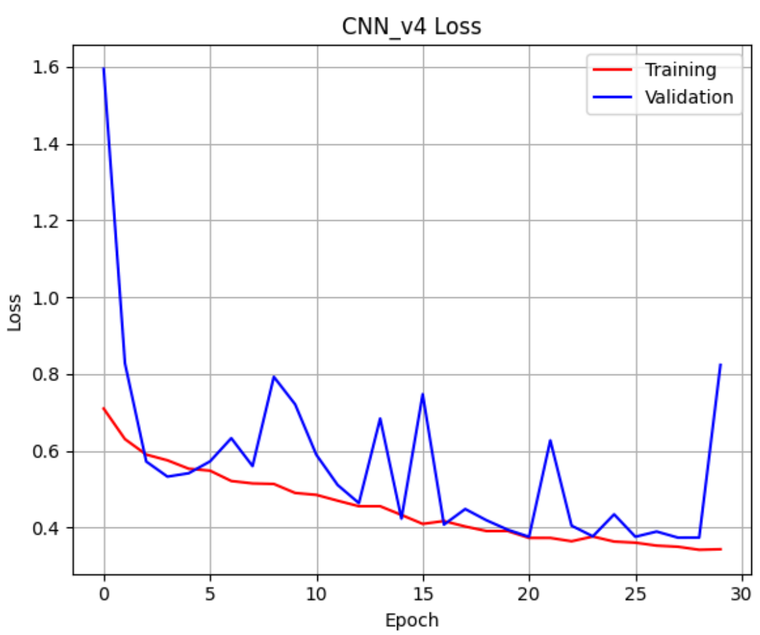


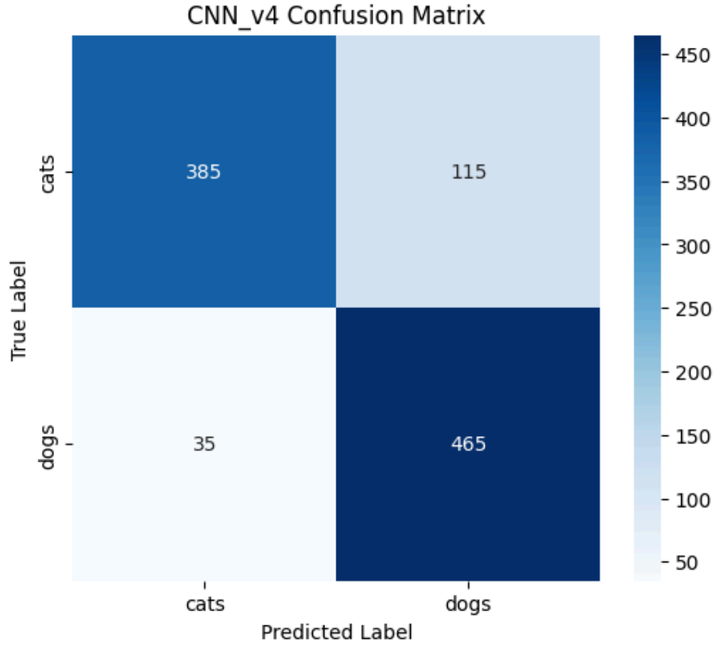
Run	Smoothed	Value ↓	Step	Relative
EfficientNet_v3.2/20250409-215721/validation	0,9854	0,9855	4	10.11 min
EfficientNet_v3.2/20250409-215721/train	0,9822	0,9843	4	10.11 min
VGG16_v1/20250406-104841/validation	0,9642	0,967	29	1.107 hr
VGG16_v1/20250406-104841/train	0,9585	0,9582	29	1.107 hr
CNN_v4/20250408-100533/train	0,8483	0,8526	29	34.55 min
CNN_v4/20250408-100533/validation	0,7695	0,6835	29	34.55 min

Comparação entre modelos (Tensor Board)

nota final: 20

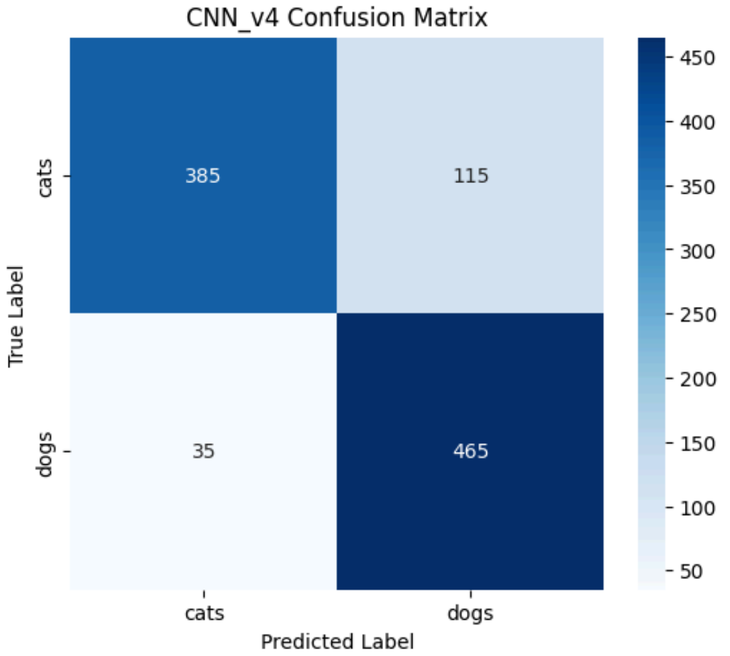




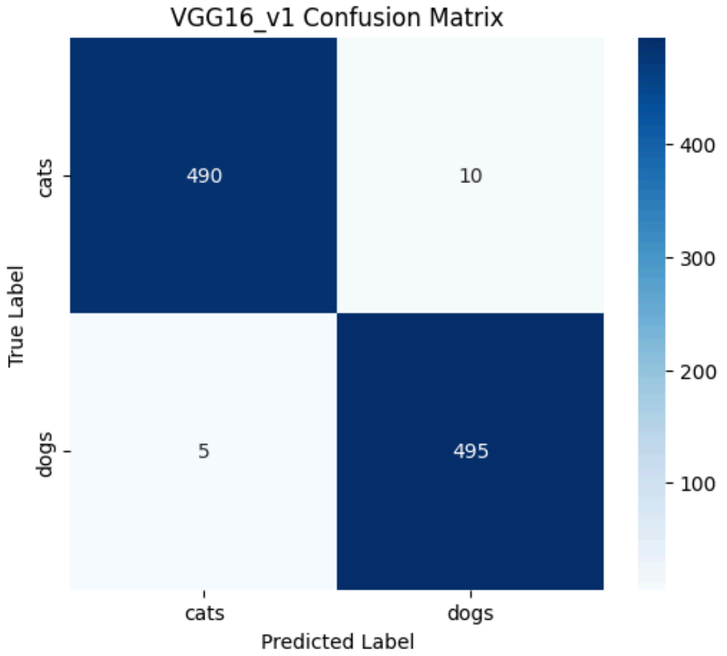


Accuracy, Loss e Confusion matrix do Modelo 1 (CNN de raíz)

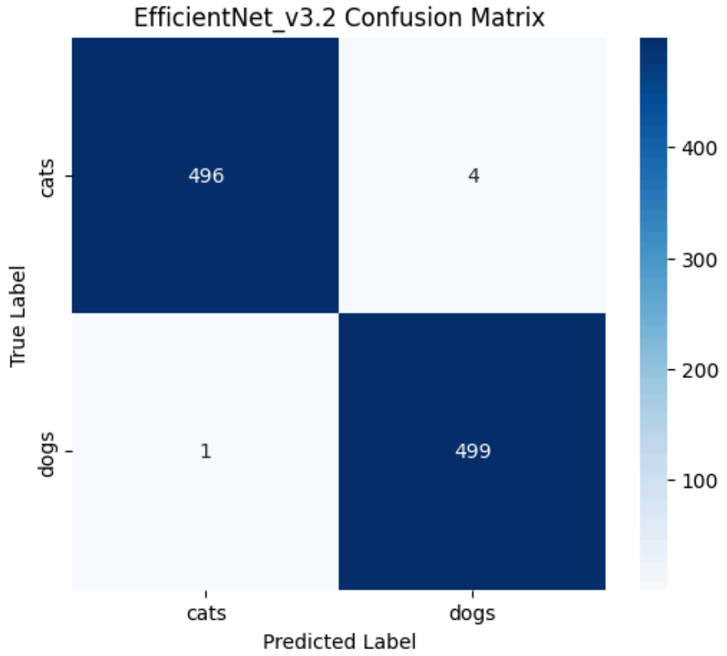
nota final: 20



CNN



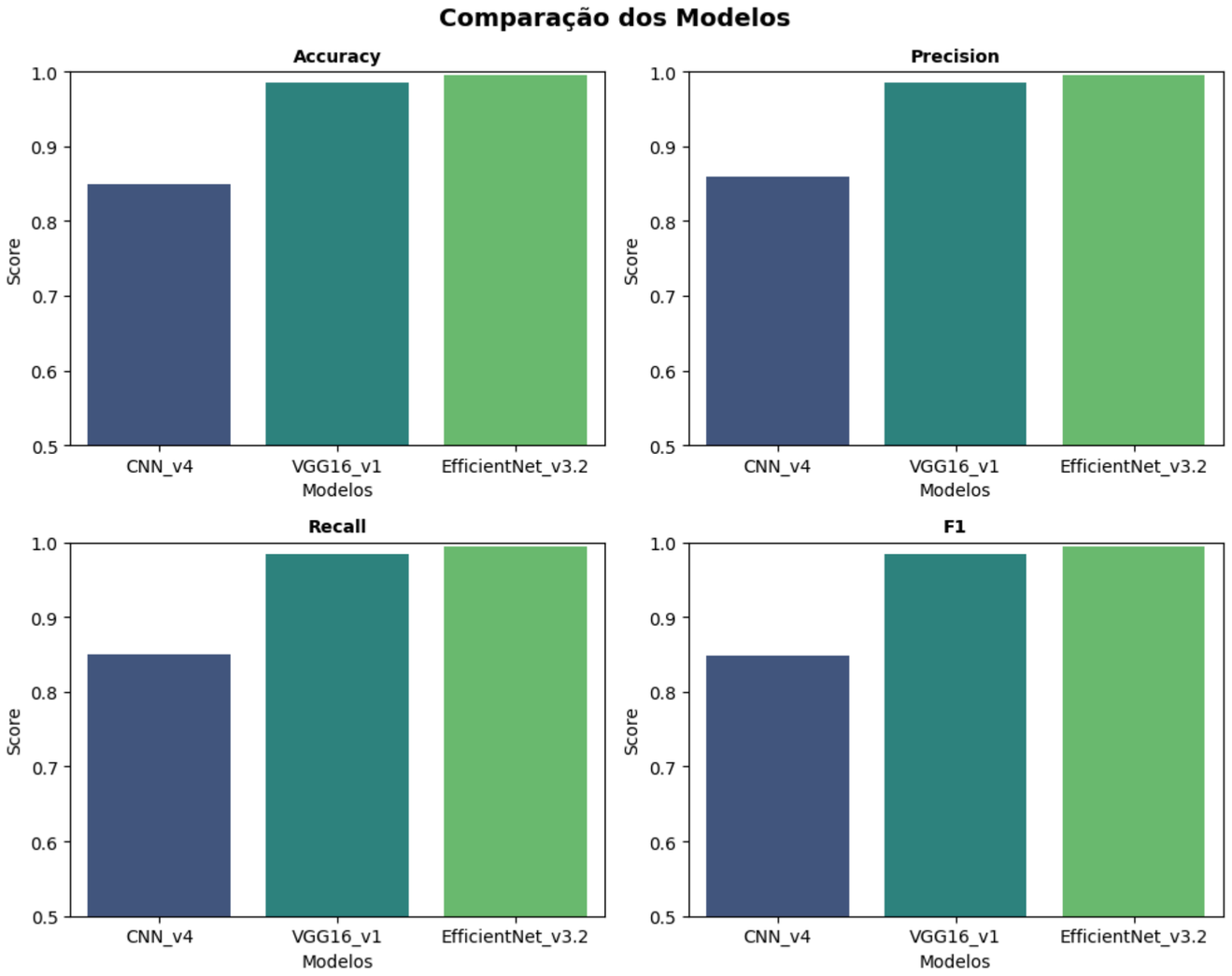
VGG16



EfficientNet

Comparação dos 3 modelos (Confusion Matrix)

nota final: 20



Comparação dos 3 modelos (segundo as métricas)

nota final: 20

Extra 1: ver previsões (certas e erradas)

nota final: 20

Extra 2: ver erros do modelo

nota final: 20

Trabalho da pós-graduação

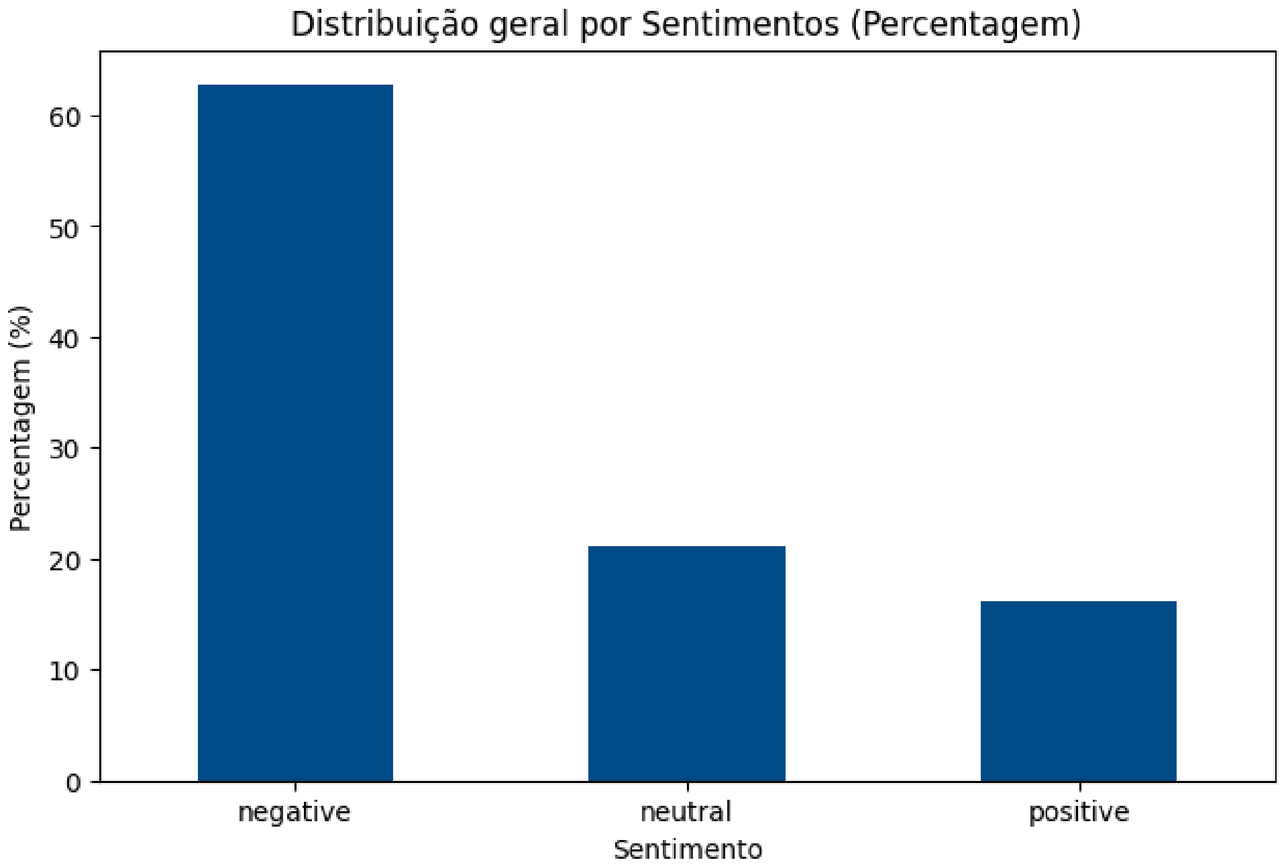
Natural Language Processing

O projeto utiliza o dataset “Twitter US Airline Sentiment” (Kaggle) para a **análise de sentimentos**. Inicia com uma análise exploratória dos tweets da **US Airways** (limpeza e visualização da distribuição de sentimentos), e construíram-se 3 **modelos de classificação** para **prever o sentimento dos tweets**.

- Análise exploratória (populatidade e reclamações);
- Criação, afinação e avaliação de 3 modelos;
- Comparação da nova classificação com a anterior.

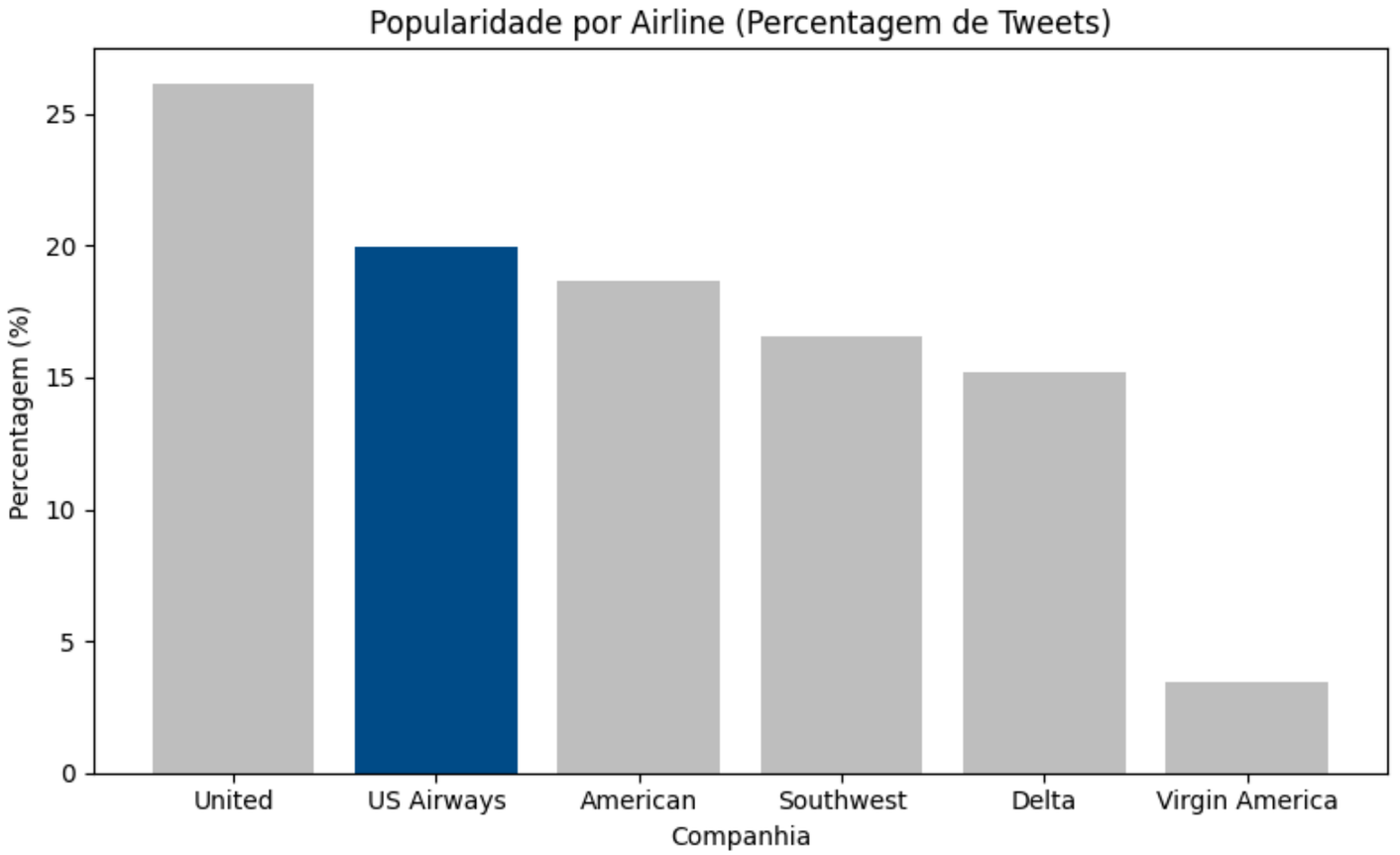
Ligação para o notebook.

março – abril de 2025



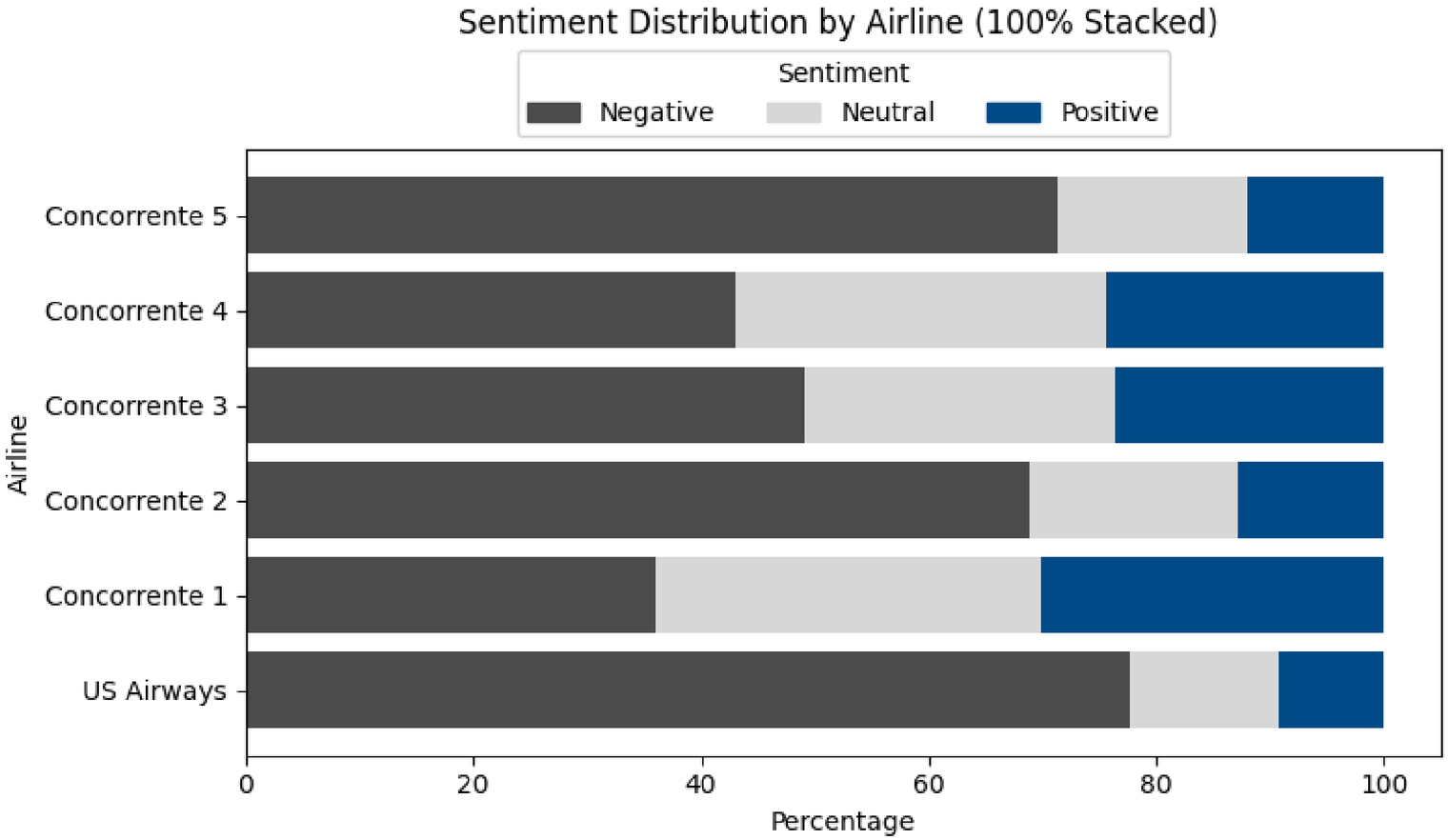
Distribuição de sentimentos

nota final: 20



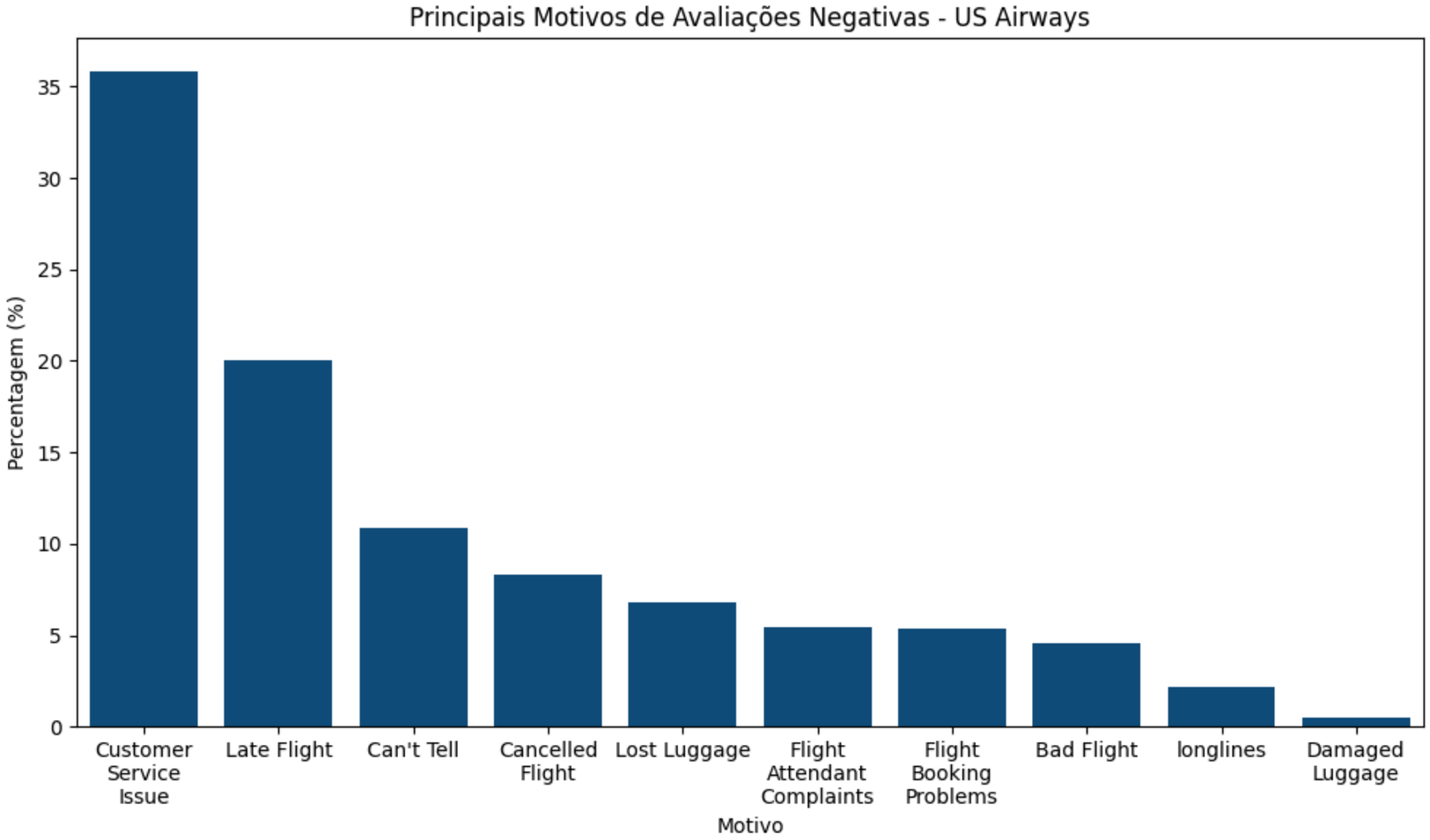
Distribuição de popularidade por airlines
(foco na “nossa companhia”: US Airways)

nota final: 20



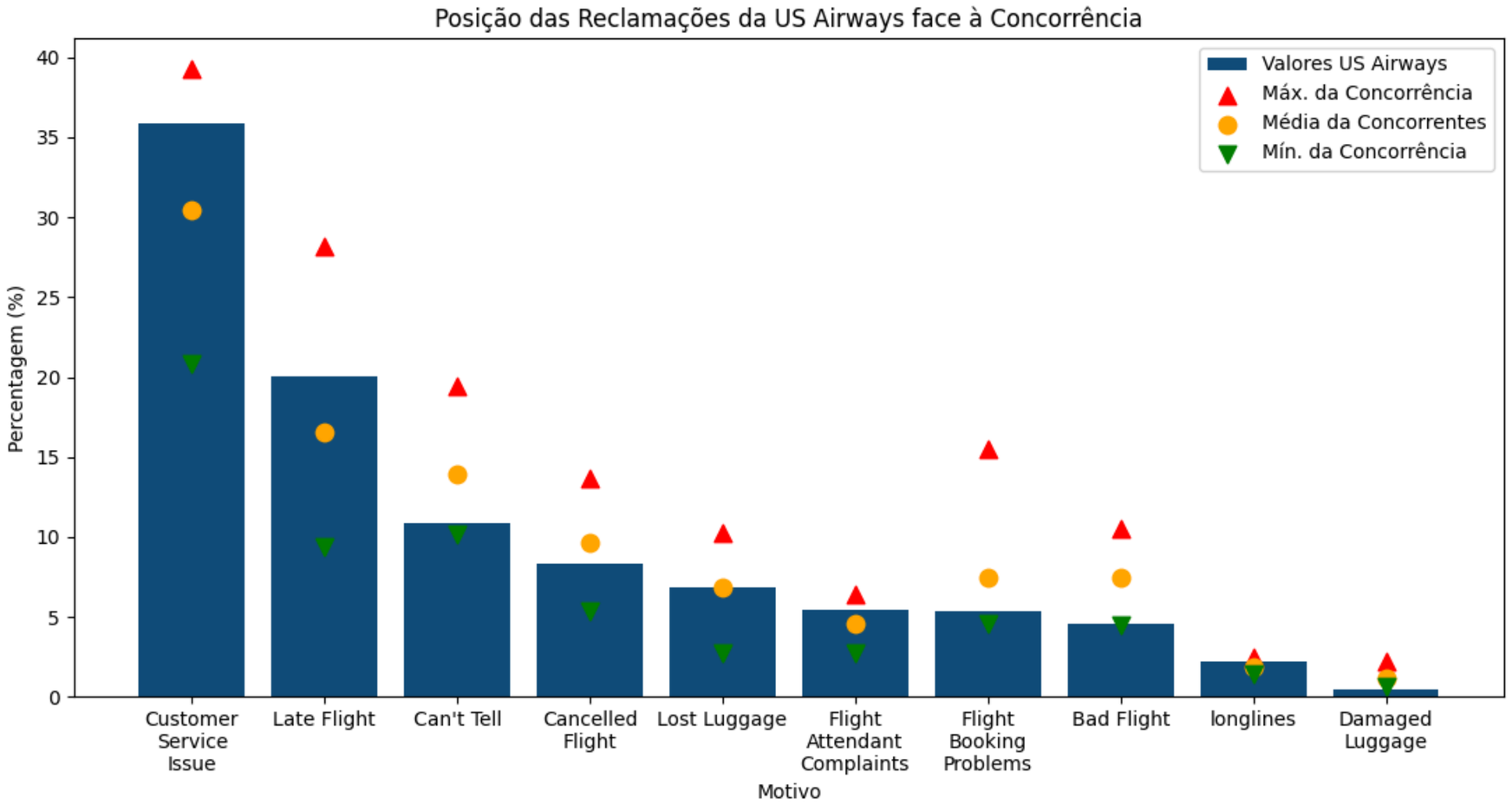
Distribuição da análise de sentimentos por companhia aérea.

nota final: 20



Avaliações negativas (US Airways)

nota final: 20

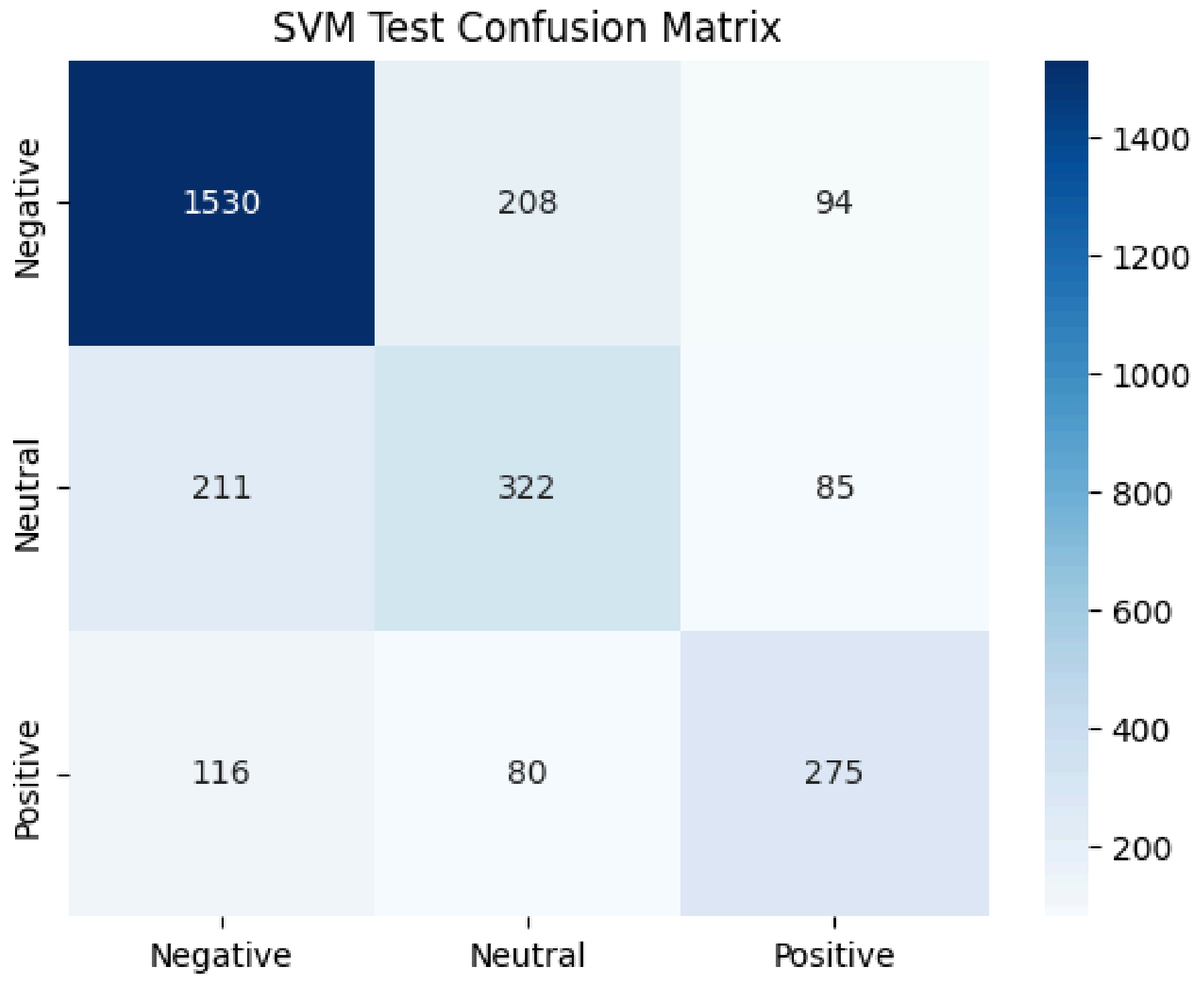


Avaliações negativas (comparação com concorrentes)

nota final: 20

WordCloud dos Tweets Negativos da US Airways

nota final: 20



Confusion Matrix

nota final: 20

Trabalho da pós-graduação

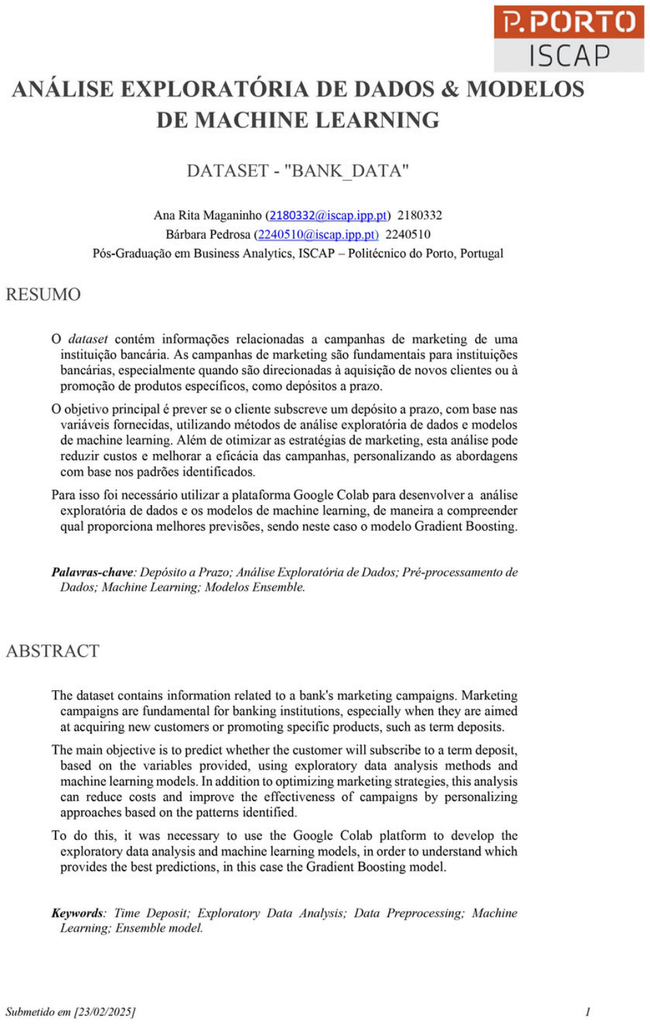
ADE & MML

As UCs de **Análise de Dados Exploratória** e de **Modelos de Machine Learning** combinaram num único trabalho prático, com o dataset “BANK_DATA”.

- Análise Exploratória do Dataset;
- Correlações e testes estatísticos;
- Criação de modelos de Machine Learning;
- Avaliação e comparação entre modelos;
- Bónus: Relatórios em Power BI.

Ligações para o relatório, notebook e Power BI.

janeiro – fevereiro de 2025



P.PORTO ISCAP

ANÁLISE EXPLORATÓRIA DE DADOS & MODELOS DE MACHINE LEARNING

DATASET - "BANK_DATA"

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RESUMO

O *dataset* contém informações relacionadas a campanhas de marketing de uma instituição bancária. As campanhas de marketing são fundamentais para instituições bancárias, especialmente quando são direcionadas à aquisição de novos clientes ou à promoção de produtos específicos, como depósitos a prazo.

O objetivo principal é prever se o cliente subscreve um depósito a prazo, com base nas variáveis fornecidas, utilizando métodos de análise exploratória de dados e modelos de machine learning. Além de otimizar as estratégias de marketing, esta análise pode reduzir custos e melhorar a eficácia das campanhas, personalizando as abordagens com base nos padrões identificados.

Para isso foi necessário utilizar a plataforma Google Colab para desenvolver a análise exploratória de dados e os modelos de machine learning, de maneira a compreender qual proporciona melhores previsões, sendo neste caso o modelo Gradient Boosting.

***Palavras-chave**: Depósito a Prazo; Análise Exploratória de Dados; Pré-processamento de Dados; Machine Learning; Modelos Ensemble.*

ABSTRACT

The dataset contains information related to a bank's marketing campaigns. Marketing campaigns are fundamental for banking institutions, especially when they are aimed at acquiring new customers or promoting specific products, such as term deposits.

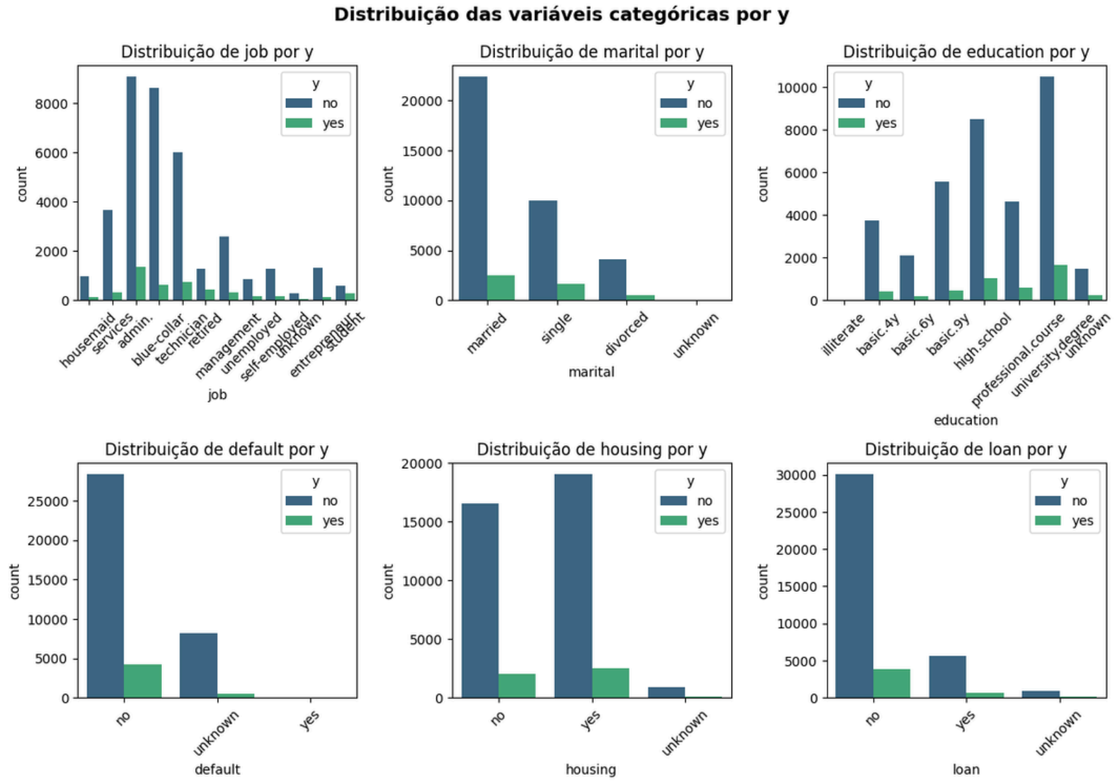
The main objective is to predict whether the customer will subscribe to a term deposit, based on the variables provided, using exploratory data analysis methods and machine learning models. In addition to optimizing marketing strategies, this analysis can reduce costs and improve the effectiveness of campaigns by personalizing approaches based on the patterns identified.

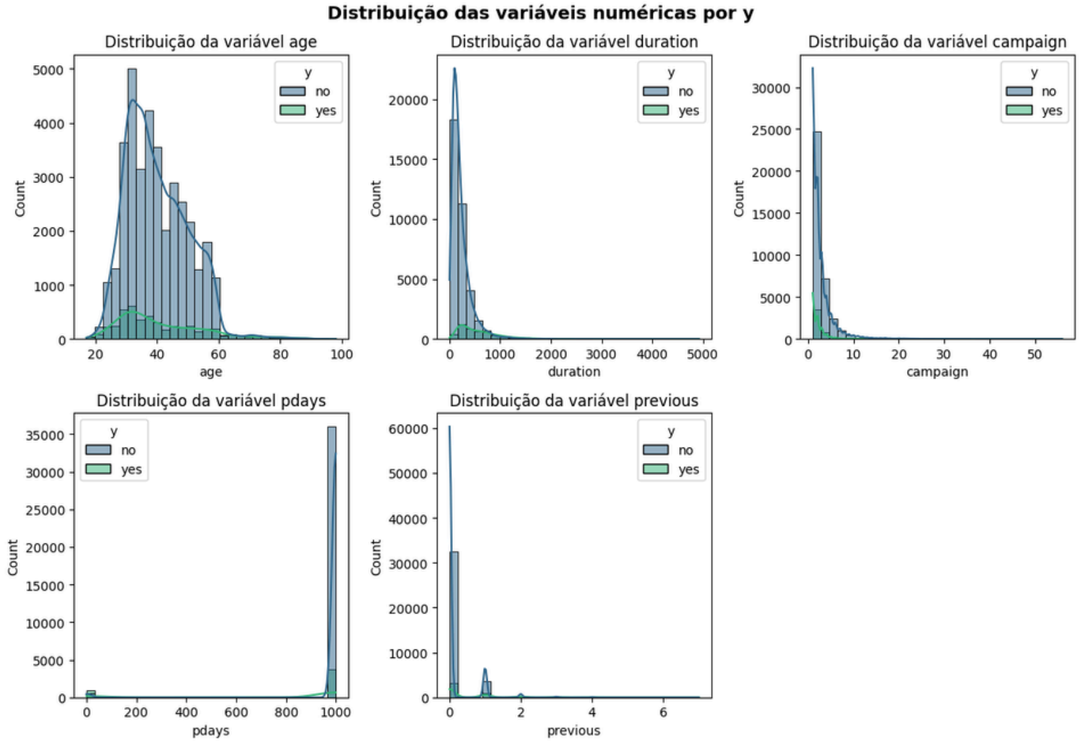
To do this, it was necessary to use the Google Colab platform to develop the exploratory data analysis and machine learning models, in order to understand which provides the best predictions, in this case the Gradient Boosting model.

***Keywords**: Time Deposit; Exploratory Data Analysis; Data Preprocessing; Machine Learning; Ensemble model.*

Contexto

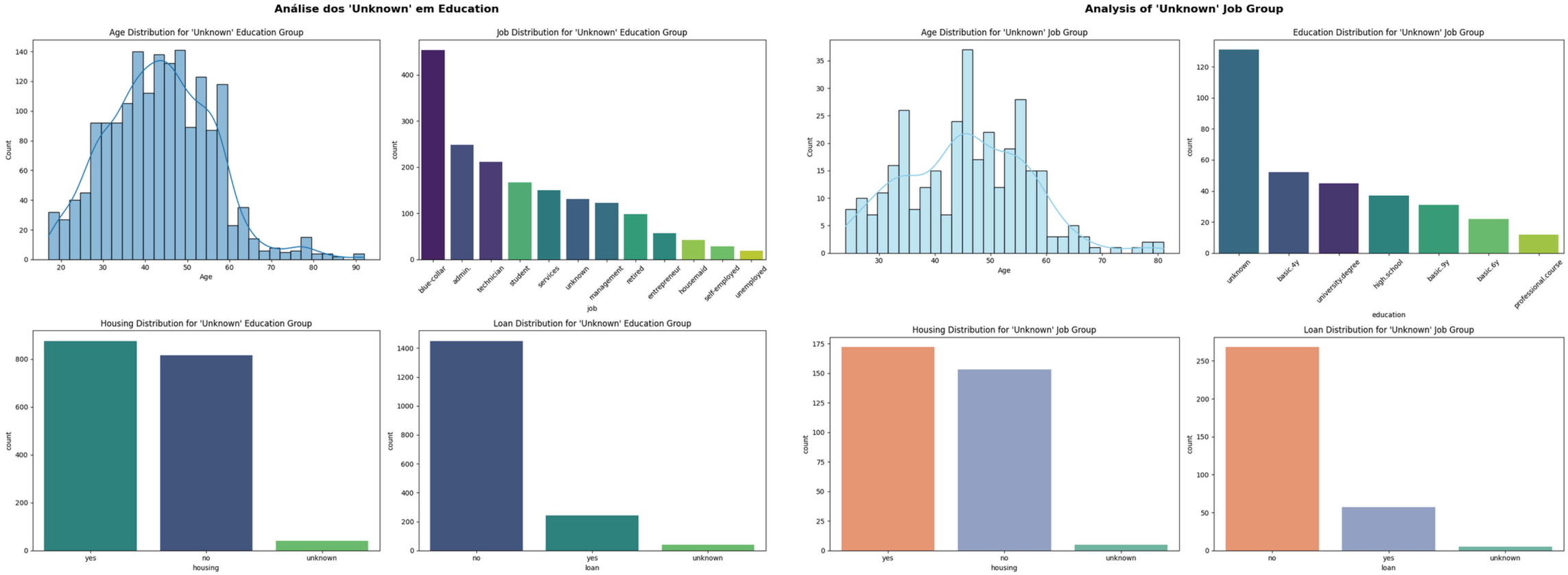
Este trabalho foi elaborado em pares, num período de dois meses, e consistiu na entrega de um **notebook** e um **relatório** escrito de 25 páginas que descreve os processos e decisões tomadas, assim como uma análise dos resultados.
A **análise de dados exploratória** permitiu conhecer os dados, identificar padrões e tratar os dados para serem inseridos nos **modelos de Machine Learning**. A segunda parte do trabalho exigiu a criação de diferentes tipos de modelos (foram testados 8 modelos), a afinação dos seus hiperparâmetros e a comparação dos resultados obtidos. Existiu, ainda, uma componente extra, realizada em **Power BI**.
Este trabalho foi avaliado com 18,40 valores a Análise de Dados Exploratória e 18 valores a Modelos de Machine Learning.





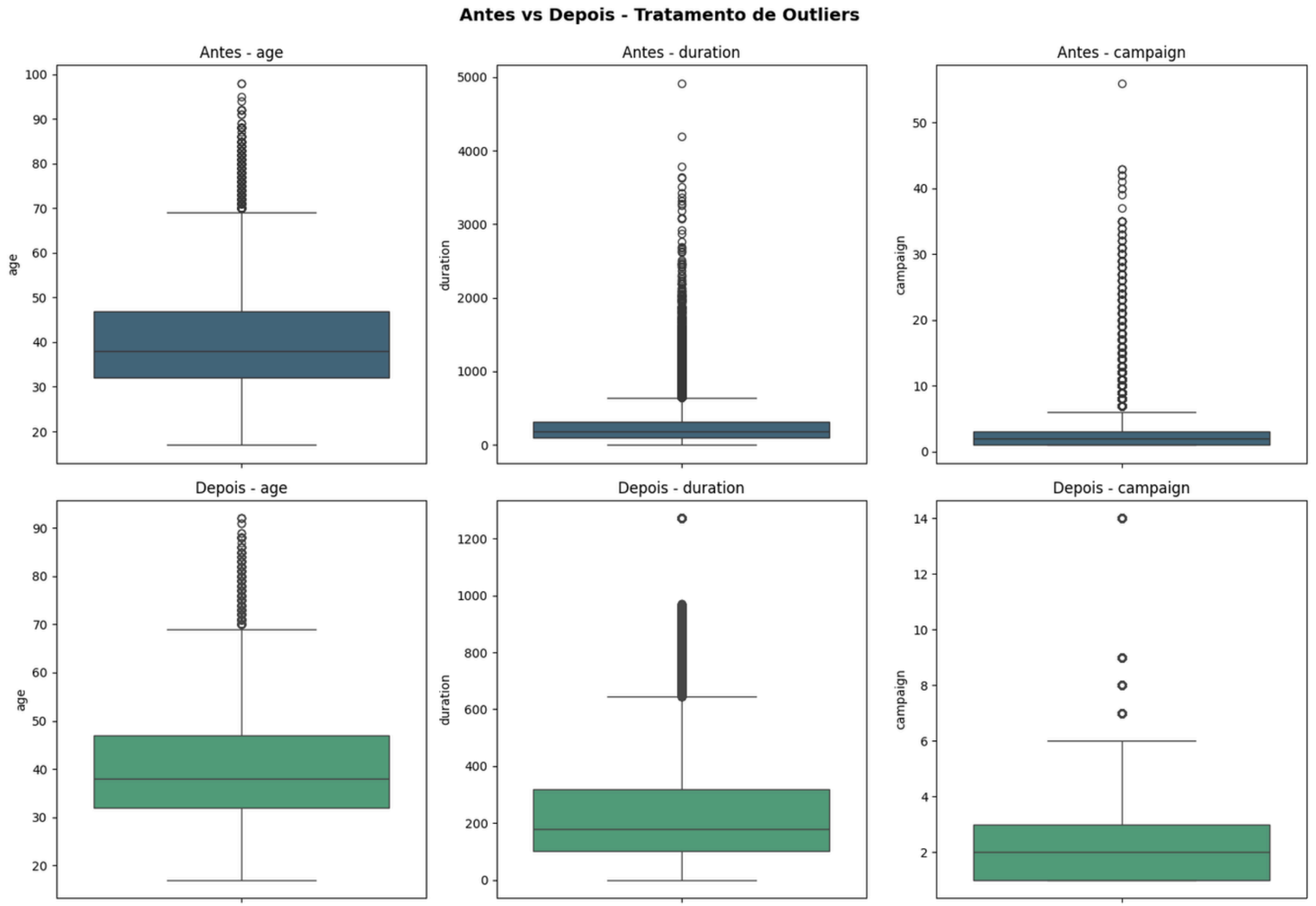
Distribuição das variáveis categóricas e numéricas

nota final de ADE: 18,40



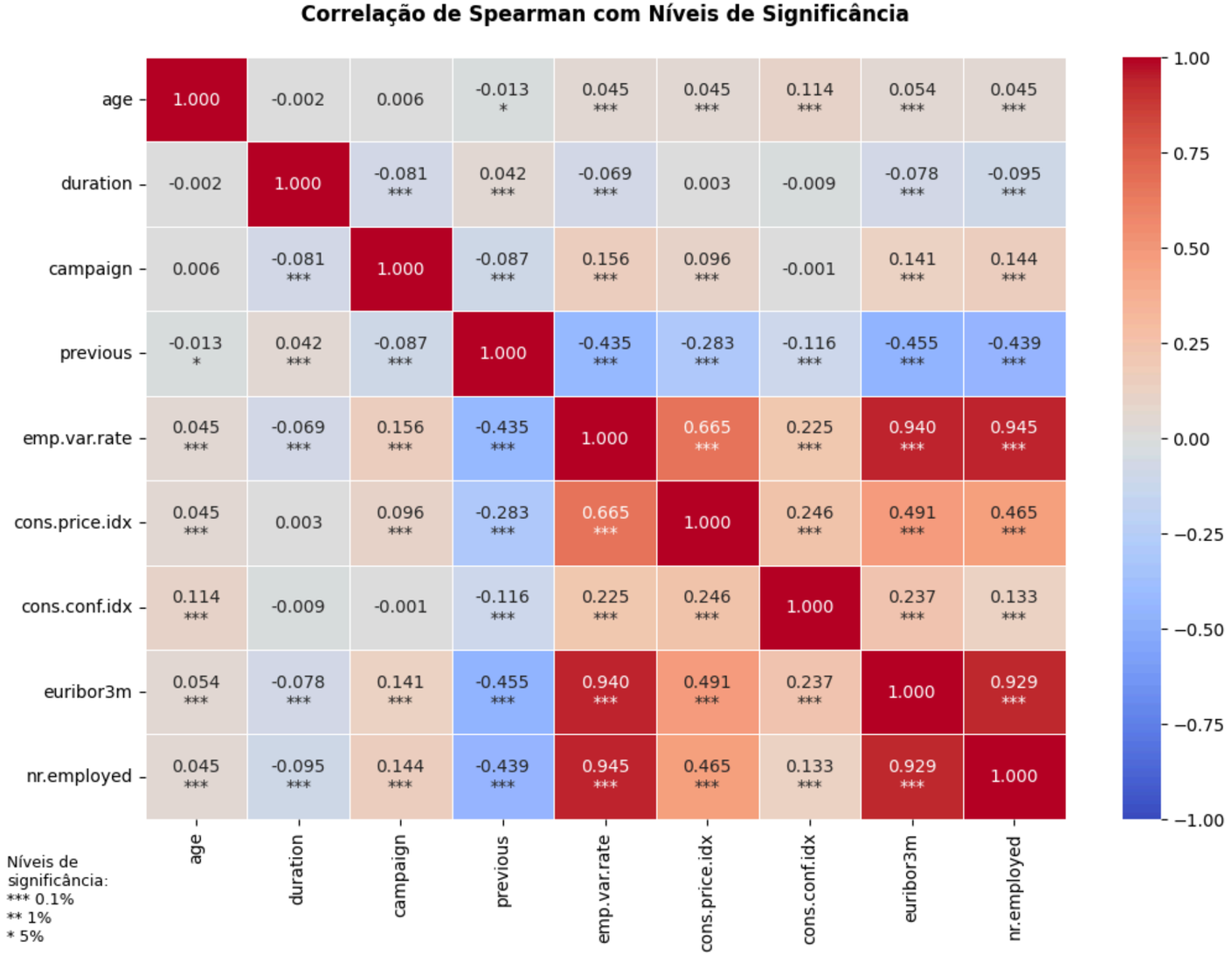
Análise dos grupos com valores em falta

nota final de ADE: 18,40



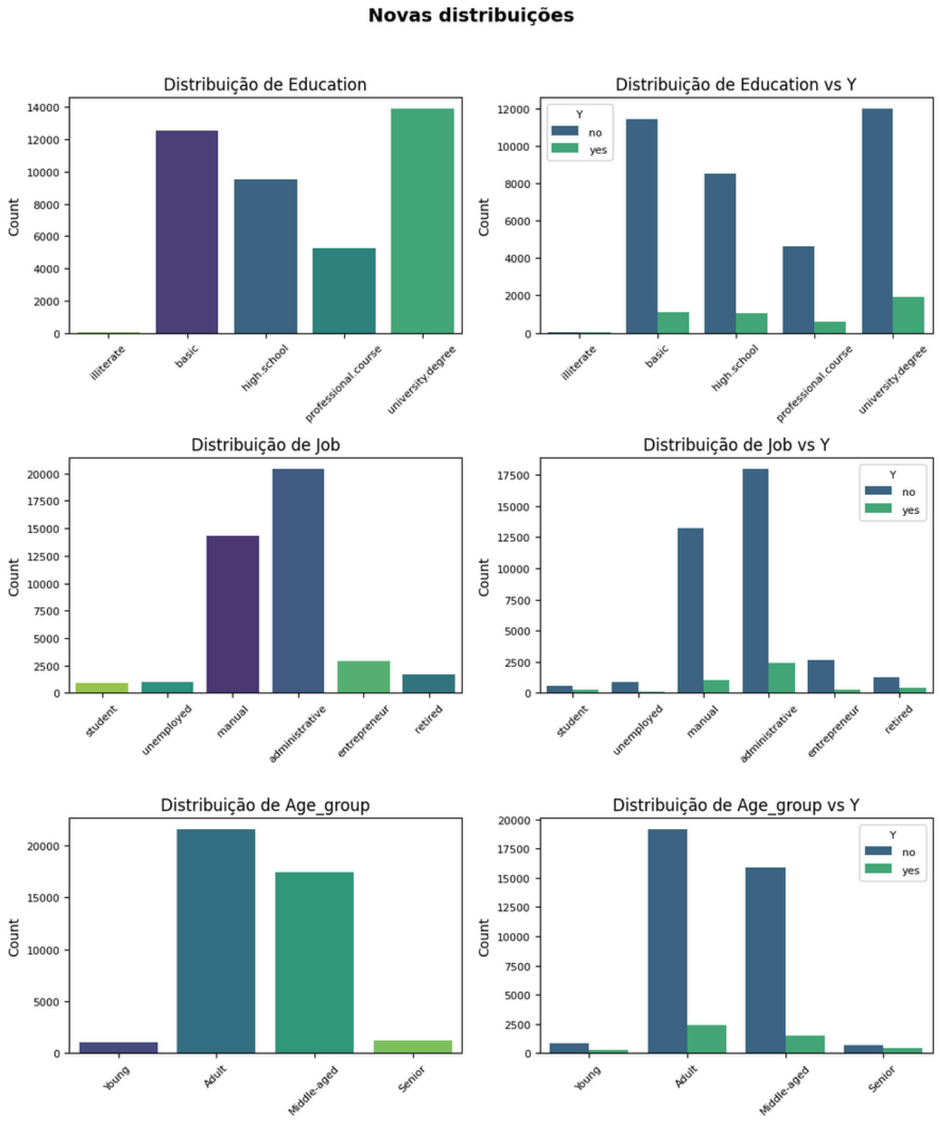
Antes e Depois do Tratamento dos Outliers

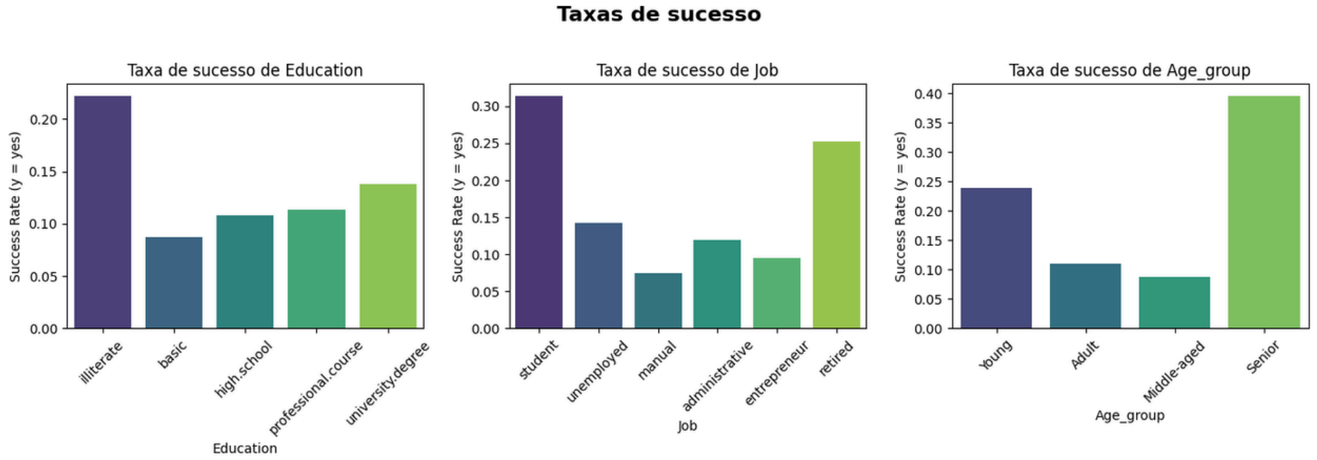
nota final de ADE: 18,40



Matriz de Correlação de Spearman com Níveis de Significância

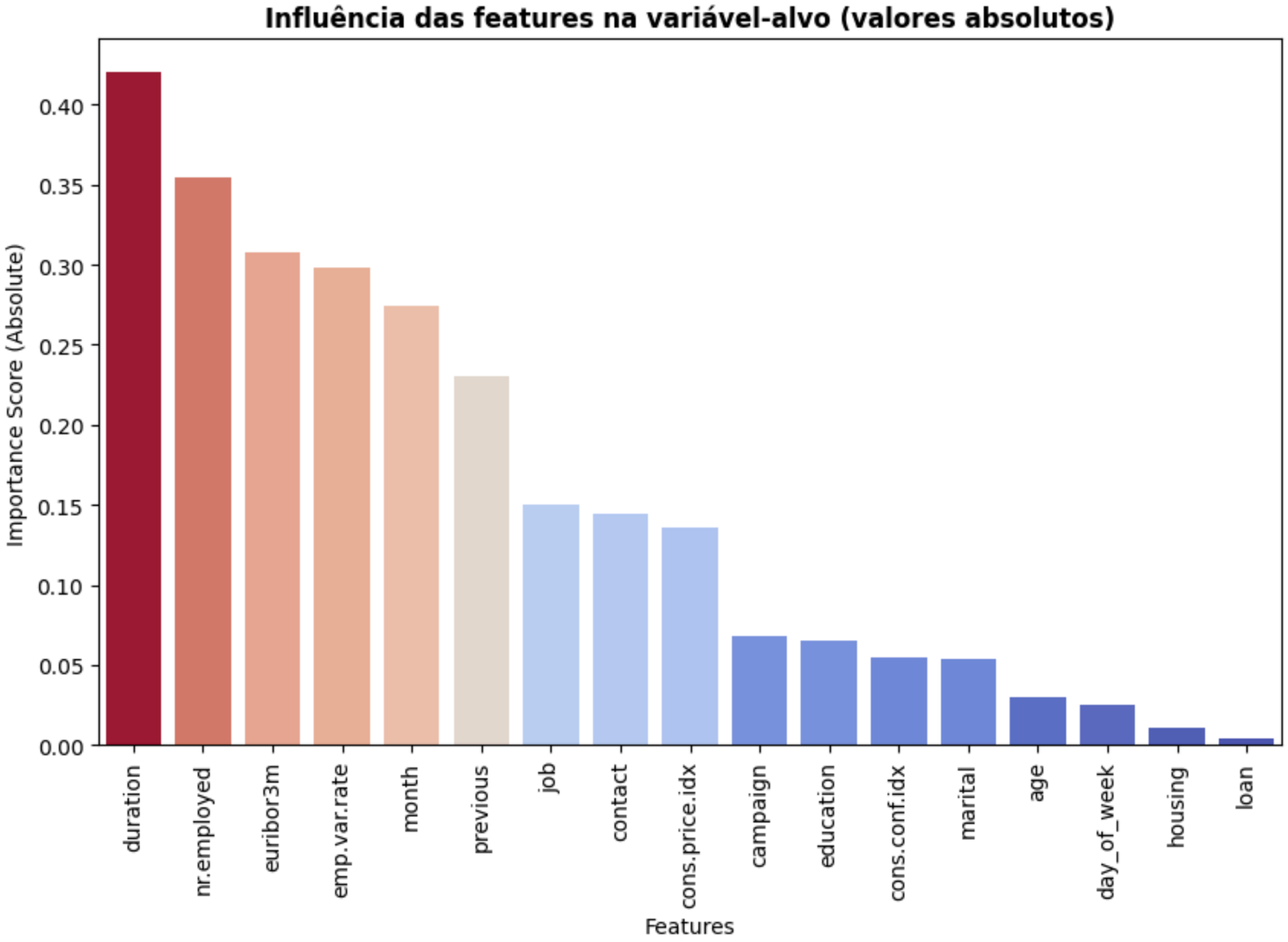
nota final de ADE: 18,40





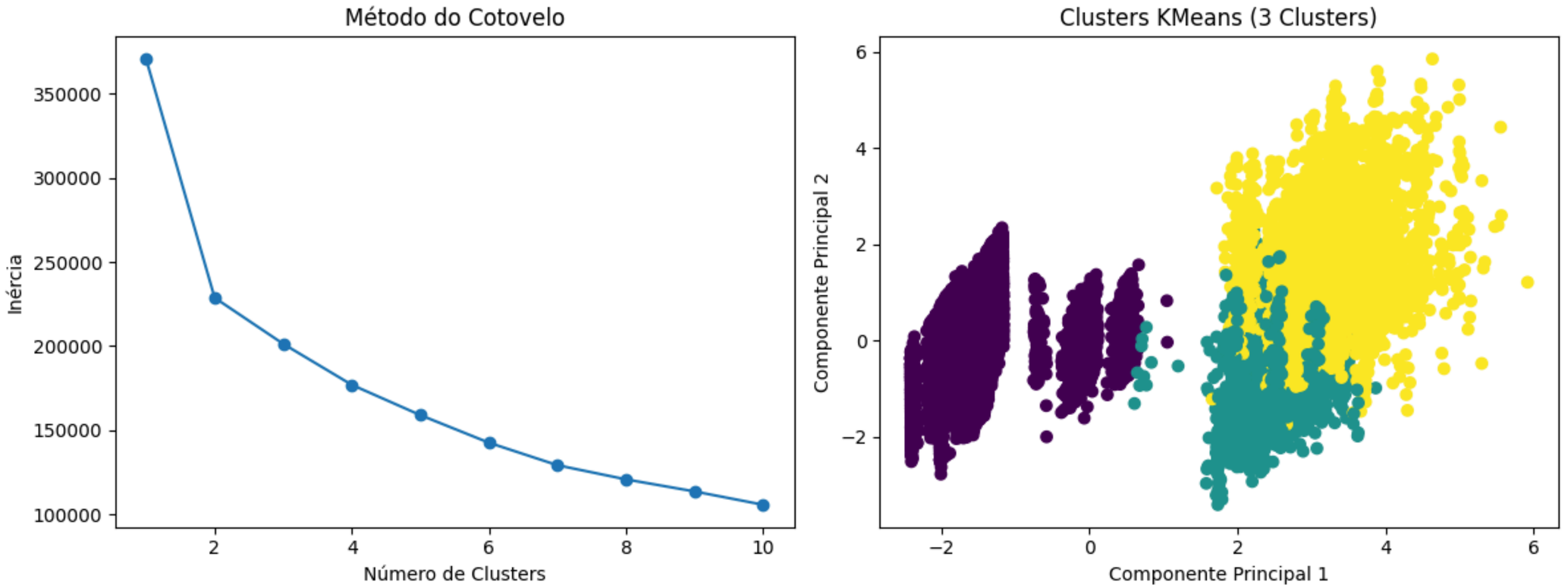
Distribuições após Limpeza e Feature Engineering; Taxas de Sucesso por categoria

nota final de ADE: 18,40



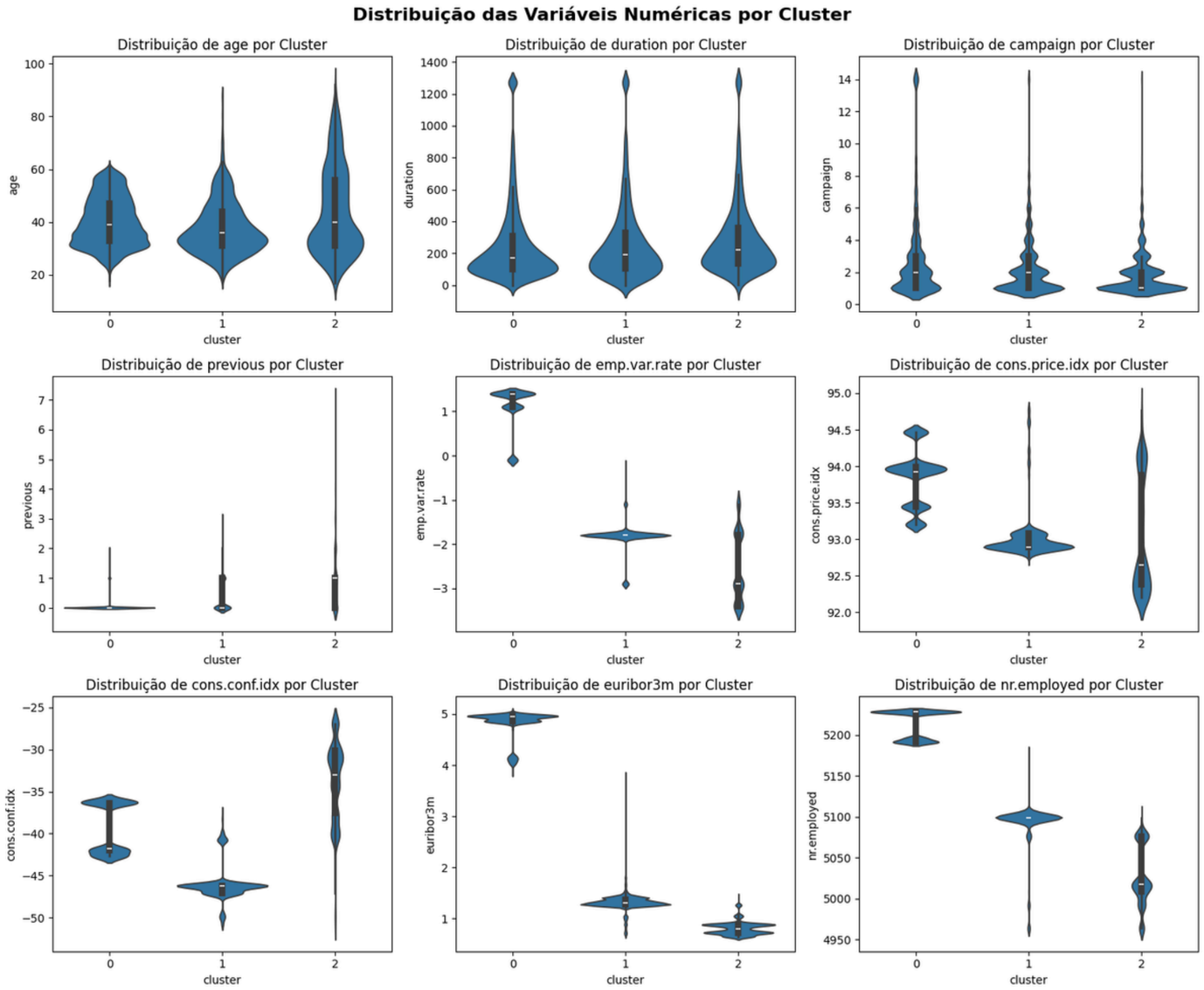
Importância das features (valores absolutos)

nota final de ADE: 18,40



Clustering KMeans

nota final de ADE: 18,40

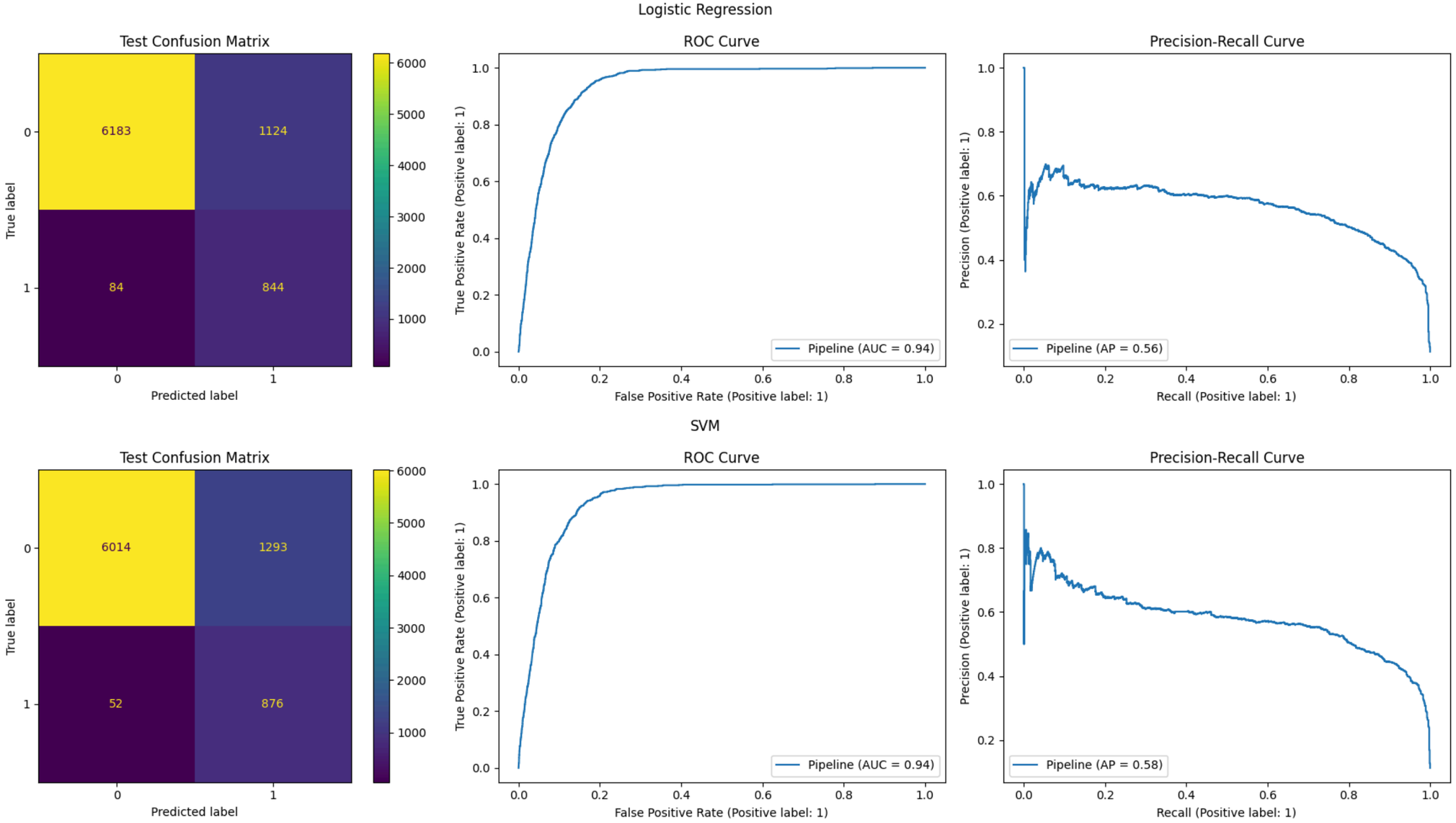


Distribuição dos clusters pelas variáveis numéricas

nota final de ADE: 18,40

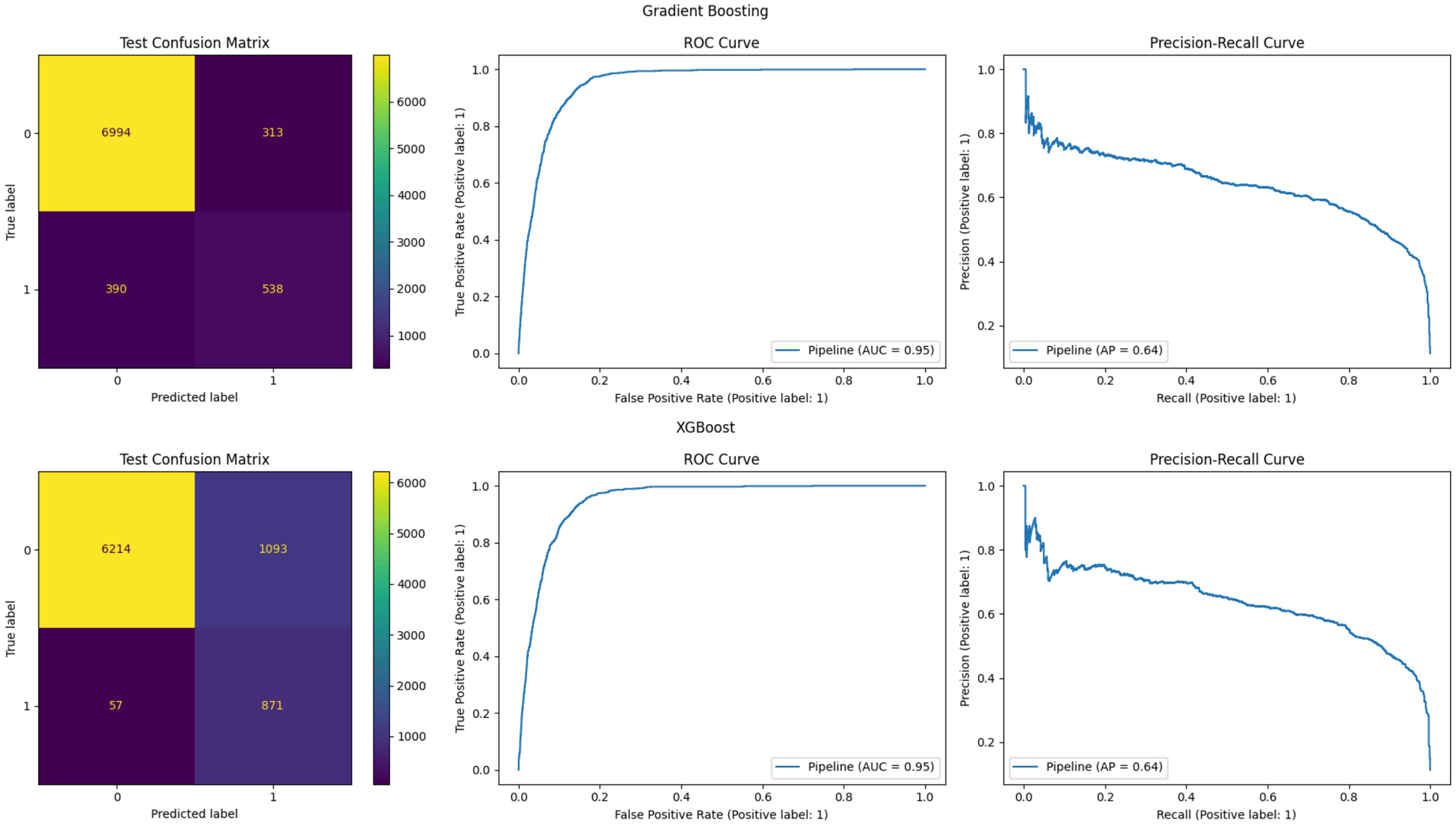
Power BI (ADE)

nota final de ADE: 18,40



Resultados inicias dos Modelos (Regressão logística e SVM)

nota final de MML: 18



Resultados inicias dos Modelos (Gradient Boosting e XGBoost)

nota final de MML: 18

Power BI (MML)

nota final de MML: 18

Coordenação e Design do Relatório

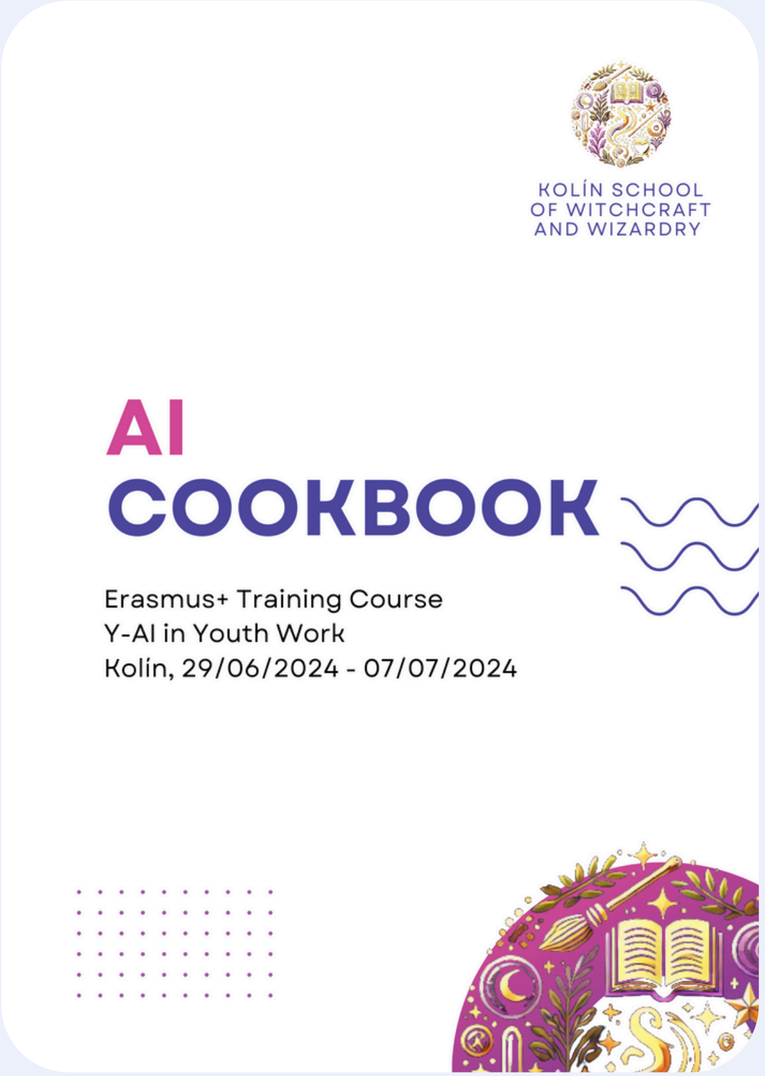
AI COOKBOOK

Eu coordenei o relatório final do Training Course. Supervisionei as várias equipas de trabalho na recolha dos conteúdos e estruturei as suas informações no documento final.

- Supervisionar a recolha dos conteúdos;
- Gerar imagens com IA;
- Estruturar os conteúdos;
- Criar o design final do documento.

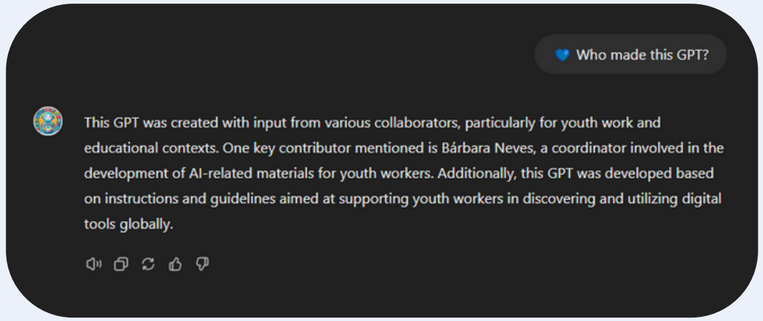
O documento final está disponível aqui e o gpt aqui.

5 de julho de 2024



Contexto

Este foi o projeto mais desafiante, uma vez que foi realizado num único dia. Fui responsável por coordenar as 6 equipas que recolhiam a informação e, posteriormente, estruturar todo o documento e o seu respetivo design. Trata-se de um documento complexo, que além de sintetizar em 48 páginas um *training course* de 8 dias sobre Inteligência Artificial, engloba um *Generative Pre-trained Transformer (GPT*) focado em *Youth Work*.



KOLÍN SCHOOL
OF WITCHCRAFT
AND WIZARDRY

AI COOKBOOK

Erasmus+ Training Course
Y-AI in Youth Work
Kolín, 29/06/2024 - 07/07/2024

AUTHORS:

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Group 4 - David, Riccardo
Group 5 - Chema, Fatima, Ingrid, Veronika, Laura
Group 7 - Alex, Jakob, Jaime, Paolo

COORDINATORS:

Group 6 - Bárbara, Rinalds

This report was prepared as part of the Erasmus+ Training Course **"Y-AI in Youth Work"** facilitated by **Frederik Kaae Kirk** and **Julia Zaitseva-Kirk**, in Kolín, Czech Republic, from 29/06/2024 - 07/07/2024.

This document consolidates the lessons learned from the **sessions** and **activities** conducted throughout the week and provides summaries and links to all the **AI tools** discussed during the project.

This project was co-funded by the Erasmus+ Programme.

cefig · Søholm 4H · Co-funded by the Erasmus+ Programme of the European Union

TABLE OF CONTENTS

INTRO TO ARTIFICIAL INTELLIGENCE

Artificial Intelligence (AI) refers to the simulation of human intelligence processes by machines, particularly computer systems. These processes include learning (the acquisition of information and rules for using the information), reasoning (using rules to reach approximate or definite conclusions), and self-correction. AI can be categorized into narrow AI, which is designed for specific tasks like language translation or facial recognition, and general AI, which aims to perform any intellectual task that a human can do.

HUMAN AND TECHNOLOGY

Humanity's relationship with technology has been symbiotic and evolutionary. From the use of basic tools to the digital revolution, technology has shaped human development and vice versa.

EARLY TOOLS
Stone tools and fire use marked the beginning of technological influence on human evolution.

AGRICULTURAL REVOLUTION
Enabled settled societies and complex civilizations by increasing food production efficiency.

INDUSTRIAL REVOLUTION
Introduced mass production, mechanization, and significant alterations in human labor and societal structures.

DIGITAL AGE
Revolutionized communication, information processing, and daily life with computers, the internet, and mobile technology.

AI GOOD: BENEFITS AND USE CASES

AI offers numerous benefits across various sectors, improving efficiency, productivity, and enhancing the quality of life.

EVERYDAY LIFE IMPROVEMENTS

1. Personal Assistance: AI-powered virtual assistants (e.g., Siri, Alexa) help manage daily tasks, set reminders, and provide information.
2. Health and Fitness: AI analyzes diet and exercise data to provide personalized recommendations. Apps like MyFitnessPal track caloric intake and exercise routines.
3. Financial Management: Tools like Mint or YNAB use AI to track expenses, create budgets, and offer financial advice. Robo-advisors like Betterment and Wealthfront provide automated investment advice.
4. Navigation: Apps like Google Maps and Waze use AI to provide real-time traffic updates, optimal routes, and estimated arrival times.
5. Office Work: AI-driven spam filters, automated scheduling, and document proofreading improve productivity. Tools like Grammarly help with writing, and scheduling assistants like x.ai manage calendar appointments.

SECTOR-SPECIFIC APPLICATIONS

HEALTHCARE
- Predictive Analytics
- Medical Analysis
- Electronic Health Records
- Remote Monitoring
- Drug Discovery and Research

FINANCE
- Credit Decision Optimization
- Fraud Detection
- Algorithmic Trading
- Risk Management
- CS Chatbots

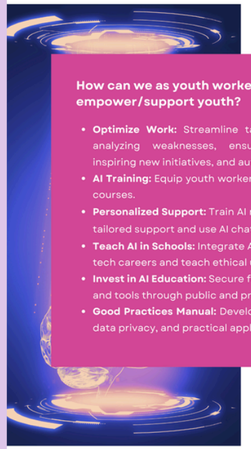
MANUFACTORING
- Predictive Maintenance
- Quality Control
- Supply Chain Optimization
- Robotics and Automation
- Production Planning

RETAIL
- Personalized Shopping
- Demand Forecasting and Inventory Management
- Service Chatbots
- Visual Search and Product Recommendations
- Fraud Detection

ENERGY
- Smart Grid Management
- Renewable Energy Forecasting
- Predictive Maintenance
- Energy Storage Optimization
- Carbon Capture and Storage

TECHNOLOGY
- Natural Language Processing (NLP)
- Computer Vision
- Machine Learning Platforms
- Robotic Process Automation (RPA)
- Cybersecurity

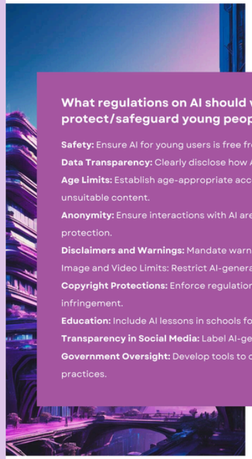
AI AND YOUTH



How can we as youth workers use AI to empower/support youth?

- **Optimize Work:** Streamline tasks like writing applications, analyzing weaknesses, ensuring copyright compliance, inspiring new initiatives, and automating paperwork.
- **AI Training:** Equip youth workers with AI skills through training courses.
- **Personalized Support:** Train AI models on local data to provide tailored support and use AI chatbots for instant assistance.
- **Teach AI in Schools:** Integrate AI education to spark interest in tech careers and teach ethical use.
- **Invest in AI Education:** Secure funding for AI training programs and tools through public and private partnerships.
- **Good Practices Manual:** Develop guidelines for ethical AI use, data privacy, and practical applications.

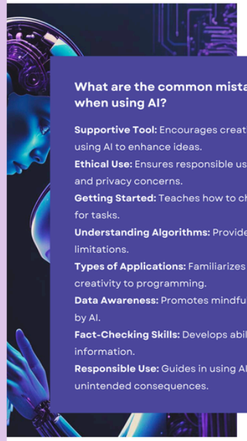
AI AND YOUTH



What regulations on AI should we have to protect/safeguard young people?

Safety: Ensure AI for young users is free from harmful content.
Data Transparency: Clearly disclose how AI collects and uses personal data.
Age Limits: Establish age-appropriate access to prevent exposure to unsuitable content.
Anonymity: Ensure interactions with AI are anonymous for privacy protection.
Disclaimers and Warnings: Mandate warnings for sensitive AI content.
Image and Video Limits: Restrict AI-generated content to prevent misuse.
Copyright Protections: Enforce regulations against AI-generated copyright infringement.
Education: Include AI lessons in schools for responsible use.
Transparency in Social Media: Label AI-generated posts for clarity.
Government Oversight: Develop tools to counter misuse and ensure fair practices.

AI AND YOUTH



What are the common mistakes young people make when using AI?

Supportive Tool: Encourages creativity and critical thinking while using AI to enhance ideas.
Ethical Use: Ensures responsible use, understanding risks like bias and privacy concerns.
Getting Started: Teaches how to choose and use AI tools effectively for tasks.
Understanding Algorithms: Provides insights into AI workings and limitations.
Types of Applications: Familiarizes with diverse AI uses from creativity to programming.
Data Awareness: Promotes mindful handling of personal data used by AI.
Fact-Checking Skills: Develops abilities to verify AI-sourced information.
Responsible Use: Guides in using AI ethically, avoiding misuse and unintended consequences.

STORIES FROM HOME

A first point of discussion is the excessive use of AI by young people. They prefer to use AI tools for almost everything, without making an effort. For example, in Romania, education is not the best-regulated field, but with this phenomenon, things can go even more wrong.

Privacy Concerns in Sweden

Sweden faces privacy concerns with AI-driven surveillance systems. For instance, facial recognition technologies deployed in public spaces raise debates about individual privacy and civil liberties.

Bias in AI Algorithms in Spain

In Spain, AI algorithms used in hiring processes have been criticized for perpetuating biases against certain demographic groups. This raises concerns about fairness and equity in employment opportunities.

Ethical Issues in Autonomous Vehicles in Germany

Germany grapples with ethical dilemmas regarding autonomous vehicles. Issues such as liability in accidents involving self-driving cars and ethical decision-making by AI systems are topics of ongoing debate.

STORIES FROM HOME

Smart Cities Initiatives (GOOD)

Portuguese cities are leveraging AI to become smarter and more sustainable. AI-powered solutions monitor traffic patterns, manage energy consumption, and improve public safety. Lisbon, for instance, uses AI to optimize public transportation routes and reduce traffic congestion, contributing to a more livable urban environment.

Economic Inequality (bad)

There is a risk that AI adoption could widen economic inequality in Portugal. While AI can drive innovation and economic growth, benefits may not be evenly distributed across society. Access to AI technologies, education, and job opportunities in AI-related fields could exacerbate socioeconomic disparities if not addressed through inclusive policies and initiatives.

Job Displacement in France

Automation in manufacturing and retail sectors in France has led to job losses. For example, automated warehouses using AI technologies have reduced the need for manual labor in logistics.

KOLÍN SCHOOL OF WITCHCRAFT AND WIZARDRY

PROMPT ENGINEERING

GROUP 4

DAVID, RICCARDO

PROMPT ENGINEERING

What is it?

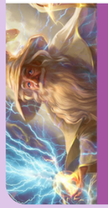
Prompt engineering involves designing and refining prompts to improve the performance of language models (like GPT).
It helps generate accurate, relevant, and useful responses for applications such as natural language processing, customer support, and content creation.

Why is it useful?

1. Better Performance: it improves the accuracy and relevance of responses.
2. Efficiency: it reduces the need for post-processing.
3. Customization: it tailors responses to specific needs.
4. User Satisfaction: it enhances the overall user experience.

General recommendations

1. Be Clear and Specific: avoid vague prompts.
2. Provide Context: include relevant details.
3. Use Structured Prompts: lists or specific questions help guide responses.
4. Limit Scope: focus on specific topics to get precise answers.
5. Experiment: try different styles and structures.
6. Include Examples: show desired response formats.
7. Set Constraints: specify length or format.



Gandalf Lakera AI: game for practicing prompt engineering

Gandalf Lakera AI is a text-based game that challenges players to craft prompts guiding an AI to achieve specific goals or solve problems.
Players interact with the AI by creating effective, precise prompts, seeing immediate effects, and receiving feedback on their performance.
This game exemplifies prompt engineering by providing a hands-on, interactive environment where players can experiment with different prompt structures.
By tackling complex tasks and receiving instant feedback, players learn to communicate intentions clearly and effectively, enhancing their ability to influence AI behavior in real-world applications.

→ Step by step guide to learning prompt engineering

AI TOOLS FOR YOUTH WORKERS

TOOLS	DESCRIPTION
OPEN AI API	• Provides access to advanced AI models for various applications. • Can be used for tasks like natural language processing, text generation, and more. • Supports integration with different programming languages and platforms.
CHAT GPT	• Privacy: Consider paying for ChatGPT Pro to opt out of data training. • Provide Information: Give detailed text-based information for better responses. • Role Assignment: Instruct ChatGPT to act as a personal teacher or consultant. • Frameworks: Ask for known frameworks related to your topic. • Context: Have ChatGPT ask you questions to understand the context better. • Prompt Refinement: Explain what you need and ask for prompt improvement. • Response Format: Request responses in specific formats like tables or lists. • Conversation Title: Use "Title: ..." at the start to set the conversation name. • Job Applications: Keep your resume and personal info handy to generate tailored job applications.
DEEPL	• An AI-based translation service known for its high accuracy. • Supports multiple languages and offers context-aware translations. • Useful for professional translations, language learning, and communication.
CLAUDE	• An AI assistant designed for writing and research support. • Helps generate content, summarize information, and provide detailed answers. • Suitable for academic research, content creation, and information retrieval.
GEMINI	• Assists in organizing and creating content using AI. • Can help manage information, generate summaries, and enhance productivity. • Ideal for content creators, researchers, and professionals needing information management.

KOLÍN SCHOOL OF WITCHCRAFT AND WIZARDRY

MODELS OF CHANGE

GROUP 5

CHEMA, FATIMA, INGRID, VERONIKA, LAURA

DEALING WITH CHANGE

Imagine you're at a party, and someone brings a brand-new game that nobody has seen before. How people react to this game over time can help us understand the Innovation Curve, a way to see how new ideas and technologies spread.

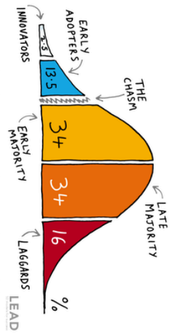
Innovators (2.5%) - These are the brave ones who try the game first. They love new things and take risks. They're the trendsetters who don't mind if things go wrong at first.

Early Adopters (13.5%) - These people are quick to see the game's potential. They're the influencers who convince others to give it a try.

Early Majority (34%) - This group joins once they see the game works well and others are enjoying it. They need a bit more proof before they dive in, but they're important to make the game popular.

Late Majority (34%) - These folks are more skeptical and wait until most people are playing the game. They want to be sure it's worth their time and effort before they join in.

Laggards (16%) - The last ones to try the game, if they try it at all. They prefer sticking to what they know and are often resistant to change.



The same goes with adaptation of new technologies. According to the **Diffusion of Innovations** theory by Everett Rogers, this pattern explains how innovations are adopted within a social system over time. But how do we manage these changes effectively, especially when it comes to something as transformative as AI?

UNDERSTAND THE CHANGE

Several models can help us navigate the change.

Let's explore some of them:

The Satir Model of Change, developed by Virginia Satir, a pioneer in family therapy, outlines how individuals and groups typically experience change. The model emphasizes people's emotional journey when faced with a new situation. It highlights the importance of understanding these emotional responses to guide people through transitions effectively.

1. **Status Quo:** This is the normal state before any significant change occurs
   - *At the start of the party, everyone is engaged in familiar activities and games.*
2. **Foreign Element:** An unexpected event or innovation disrupts the status quo.
   - *Someone introduces the new game.*
3. **Transforming Ideas:** People start developing ways to integrate and adapt to the change.
   - *As game is played, players develop strategies, learn the rules, and find ways to enjoy it.*
4. **New Status Quo:** After the change has been integrated, a new normal is established.
   - *After everyone gets used to the new game, it becomes a regular part of the party.*

Think about how quickly we adapted to using Zoom and other virtual meeting platforms during the COVID-19 pandemic. Initially, it was a foreign element disrupting our routine, but over time, we developed ways to work effectively in this new environment, creating a new status quo.

FUTURE OF AI GENERAL TRENDS AND PREDICTIONS

The future of Artificial Intelligence promises significant advancements that will reshape various aspects of our world. This overview examines key trends and predictions in AI development, including the expansion of generative AI, the rise of multimodal systems, AI's role in sustainability efforts, and emerging regulatory frameworks. As AI continues to evolve, it presents both exciting opportunities and important challenges that will shape our technological landscape in the years to come.

GENERATIVE AI

Generative AI is set to expand significantly, moving beyond text generation to include capabilities in video, audio, and image creation. This technology is already being utilized in creative industries such as filmmaking and marketing to produce deepfake avatars and special effects
Generative AI won't replace writers and graphic designers; however, it dramatically speeds up the entire process by generating images and text, rephrasing, making it shorter, longer, or simpler, and by fact- and grammar-checking it. The trend of generative artificial intelligence speeding up work applies to any job and activity. It offers the potential to automate tasks, boost productivity, reduce costs, and offer new growth opportunities.
The widespread availability of AI content-creation tools that democratize access to information and skills makes it one of the most disruptive trends of this decade. It is predicted (1) that by 2026, the adoption of generative AI will skyrocket, with over 80% of enterprises incorporating generative AI APIs, models, and applications into their operations, up from less than 5% currently.

(1) https://www.gartner.com/en/articles/gartner-top-10-strategic-technology-trends-for-2024?ref=hackernoon.com

YouthGPT

YouthGPT is an AI-powered solution designed to support youth workers in discovering, learning, and integrating digital tools into their programs. It aims to empower youth workers globally by providing them with the necessary resources and guidance to effectively utilize technology in their teaching and engagement with youths.

Tool Discovery: Help youth workers find and evaluate digital tools suited for various tasks such as project management, collaboration, content creation, and virtual meetings.

Skills Improvement: Offer tutorials, guides, and best practices to enhance the digital competencies of youth workers.

Program Development: Assist in designing and implementing digital and hybrid youth programs with ready-to-use templates and frameworks.

Support and Troubleshooting: Provide solutions and troubleshooting tips for common issues faced while using digital tools.

One of the standout features of YouthGPT is its ability to streamline access to training materials and a comprehensive cookbook of digital tools and strategies. YouthGPT ensures that all materials generated during training sessions are easily accessible, organized, and searchable.

https://chatgpt.com/g/g-UDtP7GWZ2-youthgpt

Group 2

DATA LABELING, DATA HARVESTING

	Old datasets forced mislabeling	Music and art being used for training	underpaying workers 3rd world countries
DATA LABELING The process of annotating data with tags or labels to help AI models recognize patterns and make accurate predictions.	• Previously collected and labeled data for training AI models. • May lead to outdated AI models due to irrelevance. • Can perpetuate historical biases and worsen biased outcomes.	• Subjectivity in labeling music and art. • Need for expert knowledge in labeling. • Large scale of data required for training.	• Economic conditions • A lot of Human Resources (Cheap work force) • Under education • Less digital infrastucture
DATA HARVESTING The process of collecting large amounts of data, often from various sources, to be used for training AI models and other analytical purposes.	• Intentionally incorrect labels for data points. • Can degrade AI model performance and lead to errors	• Copyright and ownership issues. • Potential for bias in datasets. • Privacy concerns in data collection.	
EXAMPLES	• Amazon recruiting tool • Zillow real estate • Dieselgate	• OpenAI's Jukebox • Google's DeepDream • Spotify Recommendation System	• SAMA

Esquema com resumo de um documento (tarefa de uma das atividades do Training Course)

Apresentação / Pitch

Candidaturas e Pitch da JuniFEUP

Documentos submetidos nas candidaturas aos prémios europeus e nacionais do Movimento Júnior. Reúnem KPIs da JuniFEUP em 2021 e 2022.

- **2021** **JEE Excellence Awards** - Nomeação
- **2022** **JeniAL Awards** - Vencedor

Ferramentas utilizadas: Microsoft Powerpoint

2021 - 2022

Contexto

A candidatura aos prémios do Movimento Junior exige um documento (suporte textual detalhado) que, posteriormente, funciona como apoio visual durante o pitch final.
Eu trabalhei nos documentos submetidos referentes aos KPIs de 2021 e 2022. Como resultado, a JuniFEUP foi nomeada aos **JEE Excellence Awards** (nível europeu) e premiada a **Junior Empresa mais Promissora** no **JeniAL Awards** (nível nacional).
Este processo permitiu-me reunir e combinar grandes quantidades de informação, tanto em texto como em esquemas, e apresentá-la de forma dinâmica e divertida, seguindo a identidade visual da JuniFEUP.

2021 JEE Excellence Awards

Our History

Founded in 2001

58 active members

+500 Alumni

+150 projects

3 national and international prizes

Internal Restructuration and Updated Brand Image

▶ JuniFEUP – Junior Enterprise of the Faculty of Engineering of the University of Porto - was founded in 2001 by 12 engineering students who wanted to further develop their soft-skills and help bridge the gap between the academic and professional world. Since then, we've always looked for new ways to grow, contributing to the building of JADE Portugal, JE Portugal predecessor, alongside five other Junior Enterprises in 2004.

▶ In 2008 we won The Most Innovative Project in Jade Excellence Awards with the project "A&P Sublime"

▶ In 2015, JuniFEUP won the Award for Most Socially Responsible Project, by helping U.Dream to re-imagine and create their website. This allowed us to help U.Dream continue its mission to help children with special needs to have a happy and fulfilled life.
In 2017, we were distinguished as the Most Promising Junior Enterprise by JADE Portugal.

▶ Today, we are focused on growing internally and expanding. In 2021 JuniFEUP's internal structure was reorganized, with the birth of a new department – Image – which has helped us focus on creating and developing a new marketing strategy, alongside the birth of our new logo. The financial director position was updated to an Internal Vice-President in order to ensure JuniFEUP's sustainable and grounded internal growth and interdepartmental teams were created to give our members the option to broaden the areas of their work and prepare them in a multidisciplinary way.

Core Businesses

Product Development
We create, develop and optimize products according to client requirements. In these types of projects we work on every stage from sizing, conception, design and even prototyping.

IT Consulting and WebDesign
The projects in this area are focused on Technological Development. We create websites, databases, mobile applications, Customer Relationship Management (CRM) systems, resource allocation optimization algorithms, among many others.

Management Consulting
We provide support services in production management within the industrial sector and perform required market studies. Our intervention usually focuses on processes of continuous improvement, waste reduction and process optimization.

Having IT Consulting and WebDesign as our strongest and most developed core business, in 2021 we focused on developing other areas of expertise, creating dedicated interdepartmental teams to raise projects and perfect the overall workflow and strategy for them.

- Deepened our consulting learning partnership with PwC
- Are in the means of signing and managing a new learning partnership for the product development area
- Participated in consulting challenges
- Successfully ended our 1st product development project since 2017.

Our Principles

- Apply **theoretical knowledge**
- **Learn by doing**
- Fostering **entrepreneurship**
- Enhance **growth**
- Promote **employability**

Our team

▶ In its 20 years of its existence, JuniFEUP has grown into 5 departments with 7 executive board members.

▶ This past year, JuniFEUP divided the late Marketing & Sales team into the Sales and Image departments, which now are responsible for raising new clients/organizing JuniFEUP's networking event and managing JuniFEUP's social networks and external image, respectively. Quality and Control ensures the overall quality expected in JuniFEUP's internal and external processes and Human Resources manages the integration, motivation and satisfaction its highly talented team. Lastly, the Technology department is a team of more than 20 developers and web designers, responsible for developing websites, applications and data bases for our IT Consulting projects. This truly sets us apart from other JEs and avoids the need of ever outsourcing personnel. The COO works as a Financial Director, also having the responsibility to overlook all internal activities, and the CEO is responsible for JuniFEUP's strategy and external overall management.

58 members, with an average of 52 members per year

51 h of knowledge between 24 trainings

27 new members

9h handover meetings per board member

Project Portfolio

▶ ***PARTICIPO! Project (2021)***

Webdesign and development of a PWA regarding Women's Civic and Political intervention project aimed at womem living in the Porto district.

After creating an account, women are encouraged to post content and speak up their minds on an blog or Instagram-like feed.

Also, there is a news and an article section, where one may share information and keep up with every aspect of the civic life of the country and area.

▶ ***Product Development (2021)***

The project involved the development of prototypes using 3D printing, through our in-house 3D printer, and also in collaboration with a major engineering laboratory of the University of Porto.

In addition to the mechanical and ergonomic study of the product, analyzes were also carried out in terms of manufacturing processes, production volumes and materials to be used.

This project is NDA protected but marks the 1st product development project we did since 2017.

▶ ***São João Hospital Logistics Optimization (2020)***

Pro Bono project developed during the first hit of the Covid-19 pandemic in Portugal. The algorithm program divided consultations from several medical departments by periods, considering restrictions such as the office's availability.

São João Hospital is the biggest Hospital Center of the north of Portugal.

2020 vs 2021

Workload 2021: **~250 days**
(60% increase facing 2020)

Number of Projects

Income Growth: **37,8%**

Satisfaction Rate (2021): 4.5/5

ANOTHER DAY AT THE OFFICE

Business casual cocktail event, which promotes networking between students and companies. Due to Covid-19, the 2020 edition was held online.

150 Students **12** Companies

Main Internal Projects

In 2021, we developed our Employer Branding Strategy to further establish our Value Proposition and Internal and External activities.
We truly believe that JuniFEUP can only strive with motivated and satisfied members, and that's why we aim to promote discussion moments and gather the maximum of feedback possible and show how much we value the talent that comprises our team.

CIMO
Internal Consultancy for Improvement of Operations, shor for CIMO, are moments organized by the Quality and Control team to detect inefficiencies and flaws in JuniFEUP's processes. Many fruitfull suggestions are gathered every year.

ERP
JuniFEUP's Technology team is responsible for the ongoing development of a customized Information System. The goal is to centralize information and work as an Enterprise Resourse Planning System

JuniTalks
Initiave first performed in 2021 and developed by the HR team. Informal interviews are done twice per term to provide a feedback outlet in which every member can express their hardships, problems and give suggestions annonymously.

JuniNights
Team building sessions, usually paired with a training moment or General Meeting beforehand done every 2 months. This initiate started during the 2nd lockdown in Portugal, via videocalls, and recently updated to na on-person version in JuniFEUP's office.

SAM
Merit Evaluation System is JuniFEUP's evaluation process. Every member, including the Direction Board is evaluated and the information is gathered in a highly complex and extensive algorithm. This way we're able to give everyone personal feddback and reward our the most remarkable.

We want to expand Internationally

200% Increase in international synergies moments

Ongoing international project for a *Fintech* (*2nd time costumer*)

+ 10 Members participated in JE Europe Network events

2 Prior applications for JE Europe Excellence Awards

In 2021 we developed a strong internationalization strategy to record, and follow-up initiatives and efforts being made, since 2020, to grow internationally.

Our efforts to grow closer to the International Junior Enterprises Network began in 2020, by hosting a training session with a Brazilian JE. Since then, we've had the chance to participate in multiple exchange sessions with JEs and JIs from France, Switzerland and Spain. We aim to strengthen our ties with them, work on future partnerships and possibly a project together.

This year we had the pleasure to work, again, on an international project, creating an IT Solution for a European startup. This reveals the trust and satisfaction our customers have in our work, even outside borders.

Lastly, we stimulated our member's participation in international network events, in order to broaden their knowledge and share JuniFEUP's experience and availability to connect – something that didn't happen in prior years.

Long Term Overall Strategy

2021
- Juni For Community - 1st Edition
- Develop an Enterprise Resource Planning System
- Increase member satisfaction in 15%
- Employer Branding Strategy

2023
- Partnership with 1 International JE
- Win two national or international awards
- 3 members in PM / Executive Boards of the Network

2025
- Be a reference of internal and external impact by acquiring the status of most developed Junior Enterprise in our confederation
- Obtain 3 moments in the mass media

Internal development → Network Presence → External Impact

2020
- Social Responsibility Strategy
- Candidate Guide
- Member Motivation and Integration Follow-Up System

2022
- Increase member retention in 10%
- Organize a national network event
- Develop a Product Quality Test
- 1 member in PM / Executive Boards of the Network

2024
- Increase client satisfaction to 4.7
- Increase conversion rates in 8%
- Obtain 4 strategic / learning partners
- Develop a strategy to reach mass media

We want to expand Internationally

200% Increase in international synergies moments

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2022 JeniAL Awards

JUNIFEUP

Júnior Empresa Mais Promissora

JeniAL Awards

2022

História JuniFEUP

2001	2004	2005	2013	2016	2019	2020	2021
Fundação JuniFEUP	Fundação JADE (até 2016)	Departamento Qualidade e Controlo	Departamento Marketing e Vendas	1ª edição ADATO	JuniTalks	JuniInsights	JuniForCommunity Reestruturação Rebranding

Serviços

Desenvolvimento Produto

Criamos, desenvolvemos e otimizamos produtos físicos. Somos responsáveis por todas as fases do projeto – ideação, *sizing*, prototipagem e impressão 3D. Tornamos as ideias dos nossos clientes em realidade.

Consultoria IT e WebDesign

Desenvolvemos projetos focados no desenvolvimento tecnológico como websites, databases, aplicações mobile, sistemas Customer Relationship Management (CRM). O nosso departamento de Tecnologia é constituído por *developers*, responsáveis por estes projetos.

Consultoria de Gestão

Prestamos serviços de apoio à produção industrial, baseando a nossa atuação em processos de melhoria contínua, redução de desperdício e otimização dos processos. Realizamos estudos de mercado.

55 membros ativos
(média de 45 membros em 2020)

27 novos membros

Desenvolvimento Organizacional

2021 ficou marcado pela implementação oficial de *calls* interdepartamentais. As equipas foram formadas por candidaturas internas e geridas por diretores departamentais.

- *Equipa Consultoria*
- *Equipa Desenvolvimento de Produto*
- *Equipa Candidaturas do MJP*
- *Equipa Responsabilidade Social*

- Fomentar **relações interdepartamentais.**
- **Expandir leque de aprendizagem** dos membros
- **Desenvolver** 2 dos nossos **core-businesses de forma focada.**
- Realização e conclusão **do 1º projeto de Desenvolvimento de Produto desde 2017.**
- **Ampliar o espetro de SDGs** impactado.

Reestruturação Departamental

Cisão do antigo departamento de Marketing & Vendas em **2 departamentos independentes**

COMERCIAL | IMAGEM

+50% Horas de handover (**31h total**)

53 Horas de conhecimento através de 24 formações (19h em 2020)

+40 Modelações, manuais, guiões e grelhas de acompanhamento

ERP
Desenvolvimento de um Sistema de Informação de raiz com o objetivo de centralizar a informação interna e externa. Desenvolvido pela equipa de Tecnologia.
+7 membros de Tecnologia envolvidos
7 meses de desenvolvimento

CIMO
Consultoria interna para Melhoria das Operações – projeto interno para levantamento de ineficiências e defeitos nos nossos processos.
+11 membros de Qualidade e Controlo envolvidos
4 rondas concluídas
7 melhorias implementadas

JuniTalks
Entrevistas informais para recolher feedback sobre motivação e integração dos membros
+10 membros de Recursos Humanos envolvidos
+100 entrevistas e relatórios realizados

Parcerias

3 SDGs impactadas através das parcerias

+40% Parcerias (2021: 7 | 2020: 5)

+1 Learning Partnership (IT Sector – empresa de desenvolvimento de software)

Através das ***learning partnerships*** com a **PwC** e **IT Sector** oferecemos aos nossos membros novas experiências profissionais, melhores formações e obtemos acompanhamento personalizado, aperfeiçoando os nossos serviços.

- **3 parceiros** forneceram-nos **formações**.
- **5 formações creditadas** organizadas em colaboração **com a APGEI** para a **comunidade estudantil**, em 2021.
- Oferta de **1 formação creditada** da APGEI a **todos os membros da JuniFEUP**.
- Formações em temas como *Agile e Scrum, Lean Startup e Project Management.*

networkme | spark agency | ITsector | FAJDP | APGEI | statista | pwc

Rebranding

Durante 2021, a JuniFEUP sofreu um extenso processo de *rebranding*, com o update do nosso logo, código de cores e estratégia de marketing.

- **5 meses** de ideação e iteração.
- Processo creativo realizado por **1 membro da equipa de Imagem** – premiado por melhor performance no departamento.
- **+4 meses de updates** das nossas **plataformas *web*** pela equipa de Tecnologia.

Colaborações

Na JuniFEUP acreditamos que as colaborações são chave para o crescimento.

- Colaboramos com a **UPTEC** e o **INESC TEC** em **2 projetos**.
- Anualmente recolhemos alimentos para apoiar organizações durante o Natal.
- Integrantes da iniciativa *Júnior Sinergias – poll* de formações com 3 JIs e JEs (BLA, Juniscap, Power).
- Promovemos uma sessão privada de divulgação de oportunidades,realizadada pela Rolls Royce.

+85% Colaborações com organizações e parceiros

Colaboração com 3 organizações na época de Natal

JuniForCommunity

2021 marcou o arranque do Concurso de Responsabilidade Social da JuniFEUP. O projeto ou ideia vencedora é desenvolvido *pro bono* e deverá ter um claro impacto social.

O projeto vencedor foi da Já T'Explico, uma organização sem fins lucrativos formada por estudantes universitários que presta apoio a alunos do 5º-9º ano com dificuldades socioeconómicas e de aprendizagem.

- **+90 voluntários**
- **4 bases de operação no Porto**
- **+70 alunos apoiados**

ANOTHER DAY AT THE OFFICE

ADATO é o evento anual de *networking* organizado pela JuniFEUP.
Promovemos a empregabilidade da comunidade FEUP através de um evento descontraído, com direito a um *cocktail*.

- +10 membros envolvidos de 3 departamentos
- 5 meses preparação
- +30 empresas participaram
- +150 alunos presentes

SUPER BOCK GROUP | edp | KPMG | SONAE | NOS | Continental

Portefólio de Projetos

Estudo de Mercado

Projeto desenvolvido com uma empresa ***FinTech* da Suíça.** Consistiu na realização de um **estudo de mercado** focado nas **20 empresas** de seguros com maior faturação anual de **5 países europeus** diferentes.

7 Membros | 1 Mês

App Já T'Explico

No seguimento do JuniForCommunity, desenvolvemos uma mobile app com o objetivo de substituir as funcionalidades de um cartão físico de sócio por um meio virtual e mais sustentável.

7 Membros | 6 Meses

Desenvolvimento de Produto

Este projeto envolveu o desenvolvimento de protótipos usando **impressão 3D**, com o auxílio da nossa impressora 3D e em **colaboração** com um **conceituado laboratório de investigação** da Universidade do Porto: INESC TEC.

4 Membros | 5 Meses

FollowUP by JuniFEUP

A **FollowUP** é o **primeiro projeto próprio** da JuniFEUP. Esta aplicação **centraliza eventos e oportunidades** para estudantes do Ensino Superior e tem o objetivo de os **auxiliar na procura** das oportunidades que mais se adequam aos seus **interesses** e exponenciar o seu **desenvolvimento pessoal**.

14 Membros | 10 Meses

2020 vs 2021

Carga de trabalho: ~250 dias
(Aumento de 60%)

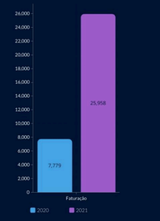
Número de Projetos

+70% Projetos Externos (2021: 17 | 2020: 10)

+112% Projetos Internos (13)

+17 Projetos Totais (30)

+234% **Faturação**



Satisfação Média: 4.4/5
(4.33/5 em 2020)

Redes Sociais

+36% Seguidores

+23% Seguidores

Podcast com convidados relevantes para a comunidade

Movimento Júnior

Na JuniFEUP compreendemos a importância e os benefícios de pertencer a uma *network* nacional e interacional em expansão. Em 2021, a nossa missão foi integrar o maior número de membros no MJP e fomentar ao máximo o espírito de entreajuda e crescimento no Movimento Júnior.

- Organizámos ***exchange sessions*** com **3 JEs/JIs Internacionais:** Junior Entreprise Genève (Suíça), Sepefrei (França) e JIIE (Espanha).
- Realizámos **+ 5 *exchange sessions*** com JEs portuguesas.
- Demos **2 formações no JEWC'21** em Gestão de Risco e Gestão de Projetos.
- A maioria dos **eventos** da *network* foram **comparticipados na totalidade** aos membros.
- Demos um total de **9 formações externas** em temas como: Como estabelecer um Departamento de Qualidade e Controlo, Abordagem Comercial, *Data Analytics*.

+200% Sinergias Internacionais

45% Membros já participaram em 1 evento do MJP (27 no total)

2 Membros como PMs da JE Portugal (*Public Affairs e Enlargement Managers*)

+ 10 Membros participaram em eventos da JE Europe

6 Eventos participados da JE Portugal

Organizadores do *Team Weekend* 2 JE Portugal (com a F3C)

Estratégia a Longo Prazo

- Juni For Community: 1ª Edição
- Começo do Desenvolvimento do ERP da JuniFEUP
- Aumento da satisfação dos membros em 15%
- Estratégia de *Employer Branding*
- Parceria com uma JE Internacional
- Ganhar 2 prémios nacionais ou internacionais
- 3 membros com cargos de PM/Direção da JE Portugal
- Ser uma referência de impacto no Movimento Júnior, sendo a JE mais desenvolvida a nível interno e externo
- Obter 3 momentos de publicidade em *mass media*

2021 | **2023** | **2025**

Desenvolvimento Interno | Impacto no MJP | Impacto Externo

2020

- Estratégia de Responsabilidade Social
- Guia do Candidato
- Sistema de Follow-Up da Motivação e Integração dos Membros

2022

- Aumentar retenção dos membros em 10%
- Organização de um evento nacional da *network*
- Desenvolvimento de um teste de Qualidade de Produto
- 1 membro com cargo de PM/Direção da JE Portugal

2024

- Aumentar satisfação média de clientes para 4.6 (1-5)
- Aumentar taxas de conversão em contratos em 8%
- Obter 4 *strategic/learning partners*
- Estratégia para alcançar *mass media*

2022 JeniAL Awards

Base de dados e Apresentação

EUFA CHAMPIONS LEAGUE (2003/04)

Trabalho realizado no âmbito da Unidade Curricular “Bases de Dados” da Licenciatura em Ciência da Informação.

- Recolha e tratamento dos dados;
- Estruturar e implementar a base de dados;
- Criar formulários e relatórios (em Access);
- Criar a apresentação final.

Ferramentas utilizadas: Microsoft Excel, Access e Powerpoint.

fevereiro - abril de 2020

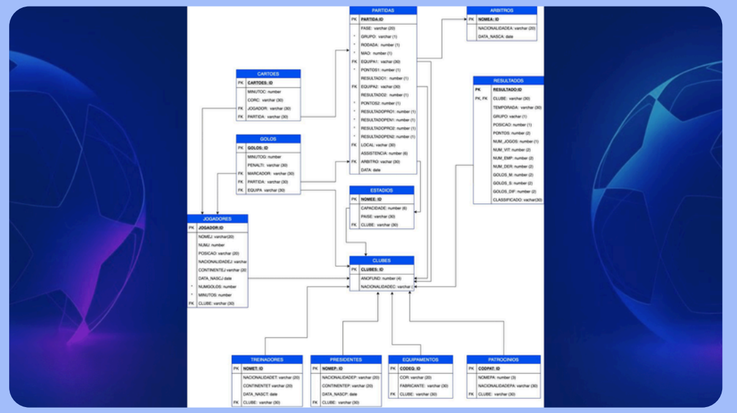
Contexto

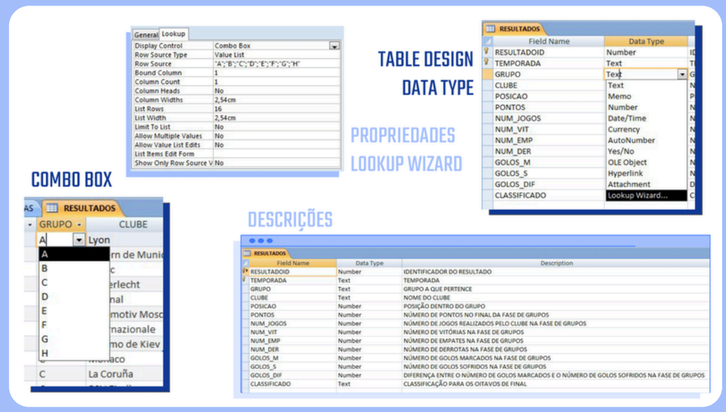
Este projeto foi desenvolvido para a unidade curricular **Bases de Dados**, lecionada no terceiro ano da **licenciatura em Ciência da Informação**. Apesar do foco ser a criação de uma base de dados, consegui explorar a componente visual, tanto da **interface**, dos **relatórios** como da **apresentação final**. Foi o primeiro trabalho que me fez pensar ***“eu gosto mesmo de fazer isto”***.

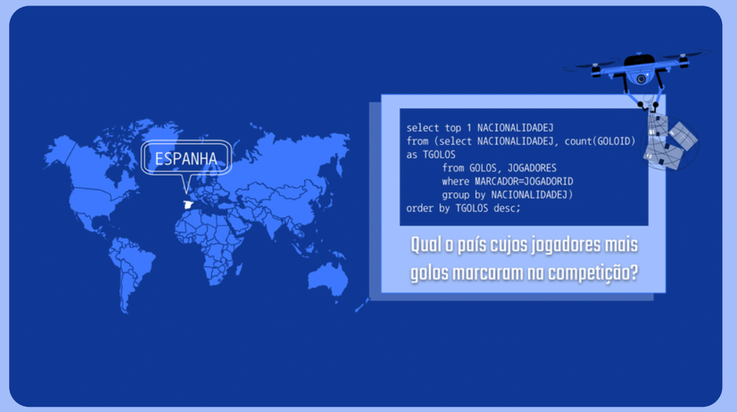
RECOLHA DE INFORMAÇÃO

MODELO RELACIONAL

- **CLUBES** (CLUBEID, ANOFUND, NACIONALIDADEC)
- **EQUIPAMENTOS** (CODEQ, COR, FABRICANTE, CLUBE→CLUBES)
- **PATROCINIOS** (CODPAT, NOMEPA, NACIONALIDADEPA, CLUBE→CLUBES)
- **RESULTADOS** (RESULTADOID, CLUBE→ CLUBES, TEMPORADA, GRUPO, POSICAO, PONTOS, NUM_JOGOS, NUM_VIT, NUM_EMP, NUM_DER, GOLOS_M, GOLOS_S, GOLOS_DIF, CLASSIFICADO)
- **ESTADIOS** (NOMEE, CAPACIDADE, PAISE, CLUBE→CLUBES)
- **PARTIDAS** (PARTIDAID, FASE, GRUPO, RODADA, MAO, EQUIPA 1→CLUBES, PONTOS 1, RESULTADO 1, EQUIPA 2→CLUBE, PONTOS 2, RESULTADO 2, RESULTADOPRO1, RESULTADOPRO2, RESULTADOPEN1, RESULTADOPEN2, LOCAL→ESTADIOS, ASSISTENCIA, ARBITRO→ARBITROS, DATA)
- **ARBITROS** (NOMEA, NACIONALIDADEA, DATA_NASCA)
- **PRESIDENTES** (NOMEP, NACIONALIDADEP, CONTINENTEP, DATA_NASCP, CLUBE→CLUBES)
- **TREINADORES** (NOMET, NACIONALIDADET, CONTINENTET, DATA_NASCT, CLUBE→CLUBES)
- **JOGADORES** (JOGADORID, NOMEJ, NUMJ, NACIONALIDADEJ, POSICAO, CONTINENTEJ, DATA_NASCJ, NUMGOLOS, MINUTOS, CLUBE→CLUBES)
- **GOLOS** (GOLOSID, MARCADOR→JOGADORES, PARTIDA→PARTIDAS, EQUIPA →CLUBES, MINUTOG, PENALTI)
- **CARTOES** (CARTOESID, MINUTOC, CORC, JOGADOR→JOGADORES, PARTIDA →PARTIDAS).







QUERY20 Na fase a eliminar, que equipa deu a reviravolta com maior diferença de golos em desvantagem?

```
select top 1 EQUIPA1, DESVANTAGEM from(
select EQUIPA1, RESULTADO2-RESULTADO1 as DESVANTAGEM from PARTIDAS where FASE='Oitavos' and MAO='1' and
RESULTADO2>RESULTADO1)0 and (EQUIPA1 in( select EQUIPA1 from PARTIDAS where FASE='Quartos')or EQUIPA1 in(select
EQUIPA2 from PARTIDAS where FASE='Quartos'))
union
select EQUIPA2, RESULTADO1-RESULTADO2 as DESVANTAGEM from PARTIDAS where FASE='Oitavos' and MAO='1' and
RESULTADO1>RESULTADO2)0 and (EQUIPA2 in( select EQUIPA1 from PARTIDAS where FASE='Quartos')or EQUIPA2 in(select
EQUIPA2 from PARTIDAS where FASE='Quartos'))
union
select EQUIPA1, RESULTADO2-RESULTADO1 as DESVANTAGEM from PARTIDAS where FASE='Quartos' and MAO='1' and
RESULTADO2>RESULTADO1)0 and (EQUIPA1 in( select EQUIPA1 from PARTIDAS where FASE='Semi')or EQUIPA1 in(select
EQUIPA2 from PARTIDAS where FASE='Semi'))
union
select EQUIPA2, RESULTADO1-RESULTADO2 as DESVANTAGEM from PARTIDAS where FASE='Quartos' and MAO='1' and
RESULTADO1>RESULTADO2)0 and (EQUIPA2 in( select EQUIPA1 from PARTIDAS where FASE='Semi')or EQUIPA1 in(select
EQUIPA2 from PARTIDAS where FASE='Semi'))
union
select EQUIPA1, RESULTADO2-RESULTADO1 as DESVANTAGEM from PARTIDAS where FASE='Semi' and MAO='1' and
RESULTADO2>RESULTADO1)0 and (EQUIPA1 in( select EQUIPA1 from PARTIDAS where FASE='Final')or EQUIPA1 in(select
EQUIPA2 from PARTIDAS where FASE='Final'))
union
select EQUIPA2, RESULTADO1-RESULTADO2 as DESVANTAGEM from PARTIDAS where FASE='Semi' and MAO='1' and
RESULTADO2>RESULTADO1)0 and (EQUIPA2 in( select EQUIPA1 from PARTIDAS where FASE='Final')or EQUIPA1 in(select
EQUIPA2 from PARTIDAS where FASE='Final'))order by DESVANTAGEM desc;
```

Próximos passos

Atualmente, frequento a **pós-graduação em Business Analytics** na Porto Executive Academy, onde estou a aprofundar os meus conhecimentos em **tratamento e análise de dados**. Esta formação complementa a minha experiência em **visualização** e permite-me tirar partido dos suportes visuais para **desenvolver uma abordagem e comunicação mais completas e estratégicas**.

Além do **Excel**, que utilizo frequentemente enquanto trabalhadora independente, expandi as minhas competências em **Python** e **SQL**, e iniciei a minha jornada em **Power BI** e **AWS**.

Estou entusiasmada por explorar novas ferramentas e aplicar os meus conhecimentos de storytelling em análise de dados.