MATEUS FRANCO E CUNHA

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Portfolio: https://mmateus-fc.github.io/

EDUCATION

Queen Mary University of London   2023 - 2027

BSc Computer Science

University of Sao Paulo   2019 - 2021

Structural Engineering Specialization - Incomplete

Maua Institute of Technology   2014 - 2018

BSc Civil Engineering

PROFESSIONAL EXPERIENCE

Amazon Web Services (AWS) — London, United Kingdom   Jun 2024 – Sep 2024
Cloud Migration Intern

- **AWS Cloud Practitioner Certification**: Achieved certification, demonstrate strong foundational knowledge of cloud computing and AWS services, with a focus on cloud architecture, security, and cost management.
- **Developed Internal Social Media Platform**: Designed and developed a social media-style web application to enhance collaboration among Amazon AWS teams. The platform allows internal users to create posts detailing their project challenges, outcomes, and best practices, fostering a community of shared expertise and knowledge.
- **Technology Stack**: Utilized JavaScript, HTML, CSS, and Node.js for full-stack development. Managed data with MySQL and employed advanced data visualization libraries such as Chart.js, Plotly, and amCharts to present insights in an engaging manner.
- **Collaborative User-Centric Design**: Contributed to an iterative, user-focused design process, working closely with team members to enhance navigation and ensure the platform effectively met the needs of internal users.
- **Cloud Infrastructure and AI Integration**: Deployed the application on AWS EC2 and integrated AWS RDS for scalable database management. Enhanced the platform's search functionality using AWS Comprehend for AI-powered keyword generation, significantly improving user engagement and content discoverability.

Shopee — São Paulo, Brazil   Mar 2022 – Aug 2023
Data Analyst

- **Advanced Data Analysis**: Utilized SQL, Python, and Power BI to implement complex data analysis techniques, optimizing logistics routes for cost efficiency. Delivered actionable insights through real-time dashboards, supporting strategic decision-making within the operations department.
- **Extract, Transform and Load (ETL) Pipelines**: Designed and maintained efficient ETL processes to ingest, normalize, and standardize data from various sources. Ensured data integrity and consistency across databases, enabling rapid data processing and analysis with updates every 15 minutes, improving decision-making speed and accuracy.
- **Automated Data Analysis**: Implemented automated data analysis workflows to track and identify issues related to routes, parcels tracking, warehouses operations, and third-party logistics providers. Detected and addressed instances of mismanagement, misuse, misplacement, and delays in orders, streamlining logistics operations.
- **Real-Time Dashboards Development**: Developed and deployed live data dashboards that facilitated a data-driven approach to logistics. Integrated critical variables, resulting in a reduction in lost and misplaced parcels month-over-month, enhancing operational oversight.

Alelo — São Paulo, Brazil   May 2021 – Aug 2023
Data Analyst

- **Web Application for Data Extraction**: Designed and developed a web application that streamlined data input and real-time extraction. This significantly reduced response times for the data analytics team, cutting request wait times from days to minutes or seconds through automated extraction by users, thus reducing the analysts' workload.

- **Software Solutions & System Integration:** Engineered database integration with geolocation features and advanced algorithms, improving user location tracking and generating actionable customer behavior insights for strategic decision-making.

- **Customer Behavior Analysis**: Conducted data analysis to understand customer behavior, enabling targeted redirection campaigns and optimizing customer flow over time. Provided insights to improve grocery and supermarket sectors, supported CRM strategies, and helped acquire new customers. Translated findings into actionable data-driven decisions to enhance market reach and revenue growth.

- **Real-Time Financial Dashboards:** Built automated dashboards with daily updates, providing stakeholders with insights into revenue fluctuations, fraudulent card usage, and high-value customer identification, enabling data-driven decision-making across all company sectors.

- **ETL Pipeline Development & Cloud Data Integration:** Designed and managed ETL pipelines to standardize and integrate data from Amazon AWS cloud storage, ensuring data consistency, accessibility, and efficiency for in-depth analysis and reporting.

Artefact — São Paulo, Brazil   Jan 2022 – Jul 2022
Data Engineer

- **Online Portal Development**: Designed and implemented a portal for third-party companies like Nestlé and Sanofi to streamline data and file submissions. Enhanced data collection efficiency and integration with Azure cloud services and Snowflake, improving dataset creation for analysis.

- **ETL Process Optimization**: Developed and managed ETL processes to handle data ingestion, normalization, and standardization from diverse sources. Ensured high data integrity and consistency across databases, supporting reliable analysis.

- **Azure ETL Flows**: Configured and optimized ETL data flows on Azure to manage the transfer of data from online portals to Snowflake databases. Improved data transfer efficiency and overall system performance.

- **Data Standardization and Validation**: Applied data engineering practices to standardize and validate incoming data. Implemented checks to ensure all inputs and files adhered to required formats, cleaned data before integration, and enhanced overall data quality and consistency.

Favo — São Paulo, Brazil   Jan 2022 – Apr 2022
Data Analyst

- **Customer Purchase Trends Analysis**: Executed comprehensive data analysis to track and interpret purchasing patterns in the grocery sector. Enabled targeted adjustments to marketing strategies, leading to increased sales and improved customer engagement.

- **Inventory Management Enhancement**: Utilized advanced analytics to streamline inventory processes, ensuring optimal product availability and minimizing stockout occurrences. Enhanced the efficiency of inventory management to better meet customer demand.

- **Product Trend Forecasting**: Refined forecasting algorithms to predict product trends with greater accuracy. Enabled proactive adjustments in inventory management, contributing to higher customer satisfaction and more strategic stock planning.

- **Financial Performance Dashboards**: Designed and implemented dynamic dashboards for financial reporting, including cash flow analysis. Delivered actionable insights that supported strategic decision-making and informed future investment decisions.

EGT Engineering — São Paulo, Brazil   Feb 2018 – Apr 2021

Structural Engineer

- **High-Rise Structure Design**: Developed detailed designs for concrete and steel core structures in high-rise buildings. Ensured compliance with stringent safety standards and regulations to enhance structural integrity and occupant safety. Utilized advanced engineering calculations to maintain structural efficiency and security.
- **Bridge Engineering**: Worked collaboratively on the design and analysis of high-span and traffic/pedestrian bridges. Applied sophisticated structural analysis techniques, including vibration mode analysis, to ensure user comfort and address the effects of wind loads.
- **Dynamic Load Analysis**: Leveraged advanced vibration theory to engineer structures that can withstand dynamic loads, including bridges, parking facilities, and buildings exposed to varying environmental conditions. Optimized structural stability and performance under fluctuating stresses.
- **Multidisciplinary Team Collaboration**: Joined multidisciplinary teams to calculate and analyze prestressed beams and bridge structures for large-scale projects. Ensured accurate structural design and integration by coordinating with various engineering and design specialists.
- **Project Collaboration**: Contributed significantly to project outcomes by closely coordinating with contractors to ensure structural designs met project specifications. It played a key role in the expansion of the Barueri Sewage Treatment Plant (STP), the largest facility of its kind in Latin America.

Outec Engineering — São Paulo, Brazil   Feb 2017 - Feb 2018

Structural Engineering Intern

- **Load and Stress Analysis**: Executed detailed calculations to evaluate loads, stresses, and deformations in structures, ensuring compliance with safety standards during construction and expansion phases. Applied precise analytical methods to maintain structural integrity.
- **Building Evaluation and Repair**: Conducted assessments of existing buildings to develop strategic repair and modification plans, successfully extending their lifespan by 10 years. Enhanced resource efficiency and reduced maintenance costs through effective planning.
- **Collaborative Design Development**: Partnered with architects to design structural elements that complemented the building's aesthetics. Provided expert recommendations on design adjustments to improve efficiency and material use, resulting in better integration and project outcomes.
- **Interdisciplinary Coordination**: Facilitated alignment between structural and architectural components, contributing to successful project execution through effective communication and coordination between engineering and design teams.

CERTIFICATION _____

- AWS Certified Cloud Practitioner (July 2024)
  Amazon Web Services (AWS)

SKILLS _____

Software & Cloud Development

- Software Engineering: Software Development, Web Development, Cloud Engineering, Cloud Solutions, Cloud Applications, Cloud Computing Architecture
- Cloud Platforms & Services: Amazon AWS (EC2, RDS, S3, Comprehend, Athena, QuickSight, Cloud9)

Programming & Data Technologies

- Programming Languages: Java, C++, JavaScript, SQL, Python
- Web Development: HTML, CSS, Node.js, RESTful APIs, MySQL, Git, GitHub
- Database & Data Engineering: ETL Development, Data Integration, Data Pipelines, Data Processing, Data Modeling, Database Management, Data Warehousing, Data Lake Architecture

Data Analysis & Visualization
- Data Analytics & BI Tools: Power BI, Streamlit, SAS, QuickSight, KNIME
- Quantitative & Business Insights: Data Analysis, Data Visualization, Quantitative Metrics, CRM Analytics

Project & Tool Proficiency
- Development Tools: DataGrip, Visual Studio, IntelliJ IDEA
- Office Applications: Microsoft Office (Excel, PowerPoint, Word)

Languages
- Portuguese: Fluent – Native
- English: Proficient

PROJECT & RESEARCH EXPERIENCE

Maua Institute of Technology — São Caetano do Sul, Brazil   Mar – Dec 2018

Tertiary treatment of sewage

- Conducted in-depth research on eutrophication levels in reservoirs across the metropolitan region of Sao Paulo in collaboration with the Environmental Company of the State of Sao Paulo.

- Leveraged statistical methods and programming techniques to analyze the variables influencing the costs of implementing tertiary treatment for domestic sewage. This comprehensive assessment aimed to determine the financial implications of extending sewage treatment across the entire metropolitan region of Sao Paulo, ultimately leading to the remediation of major rivers and water bodies in the area.

- Examined the trends and factors influencing water quality in reservoirs, particularly in relation to the phenomenon of eutrophication. Analyzed the impacts of this phenomenon on the quality of water supplied to the population.

- Achieved an impressive 95% accuracy rate in the collection and treatment of domestic effluents, amounting to a significant value of 2.27 billion US dollars from the metropolitan region.

- Effectively communicated the research findings by presenting them at a prestigious scientific exhibition: Eureka, an annual exposition hosted by the college.

Maua Institute of Technology — São Caetano do Sul, Brazil   Apr – Oct 2017

Flood monitoring system

- Collaborated with the university and city's public administration to implement a comprehensive monitoring system for tracking variations in key parameters along "Ribeirão dos Meninos" (Boy's River), one of the city's major waterways.

- Conducted an extensive analysis to identify strategic locations for sensor installation, focusing on areas with high traffic and a history of flooding incidents. This meticulous approach ensured precise and reliable water level analysis and prediction.

- Collaboratively designed and developed a program interfacing with sensors to acquire crucial data—such as location and water level readings at 30-second intervals. This dynamic data visualization facilitated the establishment of secure water level thresholds. Subsequently, automated alerts were promptly sent to pertinent stakeholders, utilizing historical data to bolster informed decision-making.

Maua Institute of Technology — São Caetano do Sul, Brazil   July 2018

Stadium grandstand

- Conducted an in-depth analysis of the renovation projects for the Allianz Park Stadium in Sao Paulo, evaluating the suitability of the structural methods employed in the expansion of the grandstands.

- Utilized finite element software to meticulously design the grandstand, enabling a thorough assessment of dynamic loads arising from crowd movements. This ensured the structure's maximum material resistance.

- Performed rigorous assessments of the structure's vibration modes and displacements. This crucial step was taken to guarantee the comfort and safety of individuals, aligning with technical standards. These evaluations were especially critical following the increase in structural dimensions of pillars and reinforcement of pre-cast beams.