

Data Architectures, Data Engineering, Data Science and Cloud Migrations expert

Personal Information

Name: João Pedro Afonso Cerqueira

Sex: Male Date of birth: 19/12/1983

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personal website and blog : <https://fuelbigdata.com>

Professional Summary

- Head and/or VP of Data Engineering in previous companies since 2017
- Define programs of engineering for Cloud solutions like:
 - AWS Cloud Migration from on-prem
 - GCP Cloud Migration and transformation
 - Modernization of Data stack with Data Mesh
 - Modernization of Data stack with Data Fabric
- Big Data / Analytics and Data Science expert with +13 years in the market
- Data Architect with hands-on experience establishing solutions for reference architectures
 - Data Mesh
 - Data Factory
 - Lambda Architecture & Kappa Architecture
- Expert in technology stacks comprising Data Analytics, Warehousing, Data Modelling, ETL/ELT, Visualisation, Data Science, Data Analytics
- Experience in the 3 cloud practices (AWS, GCP, Azure) and its full-stack analytics solutions.
- Experience in Data Analytics solutions with Spark, Databricks, Google DataProc, AWS EMR, Cloudera CDP
- Experience in hybrid and on-premises stacks Hadoop, Spark, Cloudera CDH
- Cloudera Data Analytics, Data Science and Architecture certifications and training.
- AWS Data Analytics certifications ongoing
- GCP Data Professional certification ongoing
- Experience in Kubernetes ecosystems in Azure AKS and t poc for GCP GKE, and AWS EKS.

Work Experience

- Head of Data - VP Data Architecture - Cloud Data Solutions - Data Consultancy Services - FirstDerivative (non-KX Data and investment banking)

(From Sept.2021 - current Date)

Business or sector: Consultancy services via First Derivative, for financial services institutions, across multiple markets, divided by regions NAM and EMEA.

Consultancy implementation:

- Defined the Data Engineering strategy for the company and approach to scale the Data Engineering team.
- Define use cases for consultancy offerings and application of Data Engineering patterns across business and technology functions, including :
 - Data Mesh, and product driven design of solutions
 - Data Fabric, and centrally managed cloud warehouse and modern solutions
- Implement an roadmap for team growth and team scaling across the board
- Implement a program of graduate training and onboarding into Data Engineering functions.

Technology implementation:

- Solutions and Data Architecture consultancy services via FD, for financial services customers in Toronto Canada from London UK.
 - Consulted during a discovery phase at the customer, via analysis of systems in-order to facilitate a porting of services from on-prem to cloud.
 - Solution Architecture and Data Architecture design proposal, using fpML industry solution for trading.
 - Design of new target Architecture following Data Mesh and Data Streaming patterns with:
 - Event Sourcing and Event Streaming patterns
 - Saga Patterns and aggregate/state communications between Domains and/or Services.
 - Kubernetes in AWS EKS
 - Confluent Kafka
 - Kafka Adaptors Java/Python
 - Micro-services
 - Java K8S microservices and/or
 - alternative proposal and TPOC , AWS Lambda Python microservices
 - CI/CD in AWS Code Pipelines TPOC
 - Solution didn't advance to implementation, due to customer/budget constraints.
-
- Lead VP Data Architecture - Data Unit - 6point6.co.uk (private sector customers)

(From Oct.2020 - Aug.2021)

Business or sector: Consultancy services via 6point6 Limited UK, for financial services customers in the city of London.

Consultancy implementation:

- Migration Solution design into AWS Serverless solutions
 - Analysis of on-prem environment, setup decommissioning strategies to cloud migration
 - Planning of migration into AWS solutions compatible with use cases

Technologies used:

- Design of new target Architecture AWS EMR and AWS Glue Serverless :
 - AWS Code Pipelines
 - AWS Lambda + Step functions + AWS Glue
 - AWS Lambda + Step functions + AWS EMR
 - AWS Athena
 - AWS Kinesis, Kinesis Firehose
 - Tableau and AWS QuickSight
- On-prem solution analysis, and decommissioned solutions :
 - Hortonworks HDP, Spark 2, Hadoop, Hive

- Jenkins
- Jupyter, Python pandas, PostgreSQL,
- Apache Kafka and Apache Spark with Spark Streaming.

- Lead Data Consultant - Data Science and Data Engineering - GFT Financial Limited

(From June2019 - Sept.2020)

GFT Financial Limited - City of London (<https://www.gft.com/uk/en/index/>) (Permanent)

Business or sector: Consultancy services via GFT Financial Limited UK, for non-financial services customers.

Technologies used:

1. Design and Implementation of an Collection Tool, for a data solution in a client using :
 1. Azure DevOps Pipelines
 2. Terraform for Azure SQL DW (PostgreSQL), Azure AKS (Kubernetes + Java jgroup solution)
 3. Kubernetes AKS
 4. Azure PostgreSQL, multi-region Citus cloud
 5. Data Mesh solution, with curation and cataloguing, with UI and API build with Activiti + CQRS + GraphQL .
2. Design and implement a Multi-Cloud solution for Data Science ML & Analytics, focus on Python solutions.
3. Setup of ecosystems and Tools in an Hadoop Distributed ecosystem, including :
 1. Apache Hadoop, Hive, Zookeeper, Kafka, Spark, HBase.
 2. Setup of Spark Streaming ecosystems on Kafka+Spark+Hadoop(permanent persistence) ecosystems.
4. Setup of a containerized Data Science ecosystems using docker containers :
 1. Spark latest version up to 2.4.5 and Delta Lake.
 2. Establish of DataOps landing zones for prototypes Multi-cloud and private Cloud.
5. Establishment of consultancy with GFT using the principles defined by my Fuel BigData entity.
 1. An entity dedicated to Data Engineering and Data Science consultancy.
 2. Establish a public contributor repo for democratic usage of the solution.
 1. Detials in https://github.com/jpacerqueira/Jupyter_Spark_H2O_Kafka_Client_Setup
 3. Applied all my skills in full stack Data Engineering, Analytics , Data Science with ML tools for CI/CD builds and continuous deployments.
 1. Solutions in detail in <https://fuelbigdata.com>
 4. Establishment of Container solutions with Jupyter Notebooks and tools
 1. Used in practical investigations for worldwide propagation of <https://fuelbigdata.com/?blogcategory=Covid19+Investigation>

Project roles :

1. Got involved in new customer engagement, supporting new sales pitches for new business areas and markets. Establish principles and define general technical solution approaches for Data Science in a Multi-cloud environment (GCP, AWS and Azure).
2. Lead the first Azure Kubernetes project, with implementation of a solution with security principles, azure secret management and CI/CD Azure Pipelines for its deployment.
3. Lead Data Architect for an UK customer outside Financial Services, customer in “Property Sector” . Establish the technical solution with their new Technology department. Collect information and define their new solution for Business Intelligence and Data Collection at the business level. Implement the architecture solution in

Azure Cloud using services of Azure SQL with Citus PostGreSQL and an AKS Kubernetes infrastructure to collect, exchange and service information to partners, via a WebApp solution (Alfresco API Java + TypeScript_JS). Define a General approach for Analytics for derived applications, with ETL supported using Python and PySpark with Apache Arrow accelerators. Solution at full-stack TPOC level was customer approved and handed over for development with nearshores.

- Big Data & Data Science Architect - Head of Big Data - Perform Media Group

(From November 2015 – June2019)

DAZN Media Group (ex- Perform Media) - London (<http://www.performgroup.com/contact/>) (Permanent)

Business or sector: Perform Group is a Sports Media group owner of Brands: Opta, Runningball, Goal.com, SportingNew.com and DAZN.com (OTT b2c video subscription).

Technologies used:

6. Design and implement the Big Data full stack at Perform Group using the following technologies:
 1. Cloudera Enterprise Data Hub (PaaS) , CDH 5.9 and recently CDH 5.14 .
 2. Oracle enterprise Big Data Appliance (BDA) , with Cloudera CDH.
 3. Implemented the new generation of IOT collection from tracking data supply of tracking cameras to enrich Opta event data. Usage of Akka collection tools using Fast Data principles and Kafka buffer storage for Spark Streaming analytics.
 4. Implemented a “Single Customer View” across the Portals of Perform Group , goal.com sportingnew.com , dazn.com , dabblebet.com and others to exchange customer profiles and unique_id between DW, Marketing Cloud CRM and individual site profiles. Designed a solution using Neo4J for graph calculation and Big Data Cloudera CDH for log analysis.
7. Design of a new AWS Cloud solution for DW for DAZN product using AWS EMR, RedShift, RedShift Spectrum, AWS Glue Crawlers.
 1. Design the new generations of S3 lake based on Object Store.
 2. Design the new generation of MetaStore collection using Schema on read over object store with AWS Glue Crawlers + AWS EMR + AWS Databricks
 3. Enable the reception of Media Portal profiles and customers in the new S3 Lake, from the on-premise solution designed as Single Customer View for Perform Media Services.
8. Designing a New general framework for ETL Solutions based on:
 1. Control of /raw /staged /published areas
 2. Utilize ETL technologies Apache Spark 1.6.0/2.1.0/2.3.0 (Python and Scala)
 3. Achieve published insights for apache Hive.
 4. Served insights , on-premise using Oracle Big Data SQL.
 5. Served insights, in-cloud AWS with using RedShift Spectrum.
9. Full setup of Data Science Stack for Brands Opta and Perform Media
 1. Used technologies based on Python and R languages for data science.
 1. R-Studio and R as a data science stack of the new generation of Perform logic.
 2. Setup of services with Oracle R Enterprise (ORE dbi) for ORACLE DB.
 3. Setup for BigData with Hadoop/Hive using ORCH R/cran.
 1. Design of processes and setup of services for the Data Science team, to align in the SDLC of development teams.
 2. Setup of data science services with sparklyr and tools of a new generation of machine learning and Deep learning services using R H20.ai .
 4. Setup for BigData with Hadoop/Hive using PySpark.

1. Design of processes and setup of services for the Data Science team, to align in the SDLC of development teams.
 2. Setup of DataScience stack with pyspark, sparkling water, h2o.ai services and tools for a new generation of machine learning and deep learning services using Python H20.ai.
10. Opta services, setup of SOLR search from collected Sports Data, and sports fixtures (uuids for sports venues, players, clubs, leagues, tournaments, seasons) .
11. Setup of Oracle Big Data Discovery visual tool over on-premissine BDA cluster.
1. Usage of lake with published Apache Hive in Spark context jobs.
12. Setup of H2o Deeplearning and Boosting solutions, using R.
1. Implementation of decision pipelines for content distribution for DAZN.
1. A solution T-POC for Streaming AVGBitRate evaluation of normal/abnormal conditions, in <http://bit.ly/2nFHYpf> .
 2. A solution T-POC for Malware/Phishing intrusion detection and prediction. Designed with url based evaluation , based on external/internal data and conditions, in <http://bit.ly/2qAlSok> .
13. Establishment of Fuel BigData .
1. An entity dedicated for Ai consultancy.
 2. Follow site for more details <https://fuelbigdata.com> .

Project roles :

4. Lead Architect for the new Sports Media IOT solution , responsible for ingestion of third party IOT tracking data, being matched with internal Generated OptaSports event data generated in NRT. Production of new generation of Sports insights, from an event driven to an IOT driven solution, where new insights were produced around enriched event data. Responsible for the IOT tracking software R&D, Development of new pipelines and Data Science of new algorithms and tools. Represented Perform Group at the Oracle OpenWorld 2017 in Intel Keynote sessions where our BDA solution was presented with our partner Oracle ([youtube link](#)) . Presented the project in a variety of Oracle and Cloudera events ([cloudera link](#)) in 2017 and 2018.
5. Lead Architect for BigData solution for the new generation of Media Data for Sports insights across social media, designed and implementation of the social media collection tools, using Data streams from Omniture, Google Analytics , Google Ads (ex- Google DFP), Gygia and other social media I registrations for Facebook, Twitter and other social media portals. Implementation of Google Analytics, AdWord solution and Google Ads for market understanding and segmentation. Implementation of a new generation of Marketing Cloud DMP, for Goal.com and DAZN.com brands using Bluekai from Oracle Cloud. Full deployment and end to end control of solution activation and reporting using tools such Oracle BDA BigData and Oracle Bluekai cloud solutions.
6. Lead Architect for a solution for Sports integrity for Betting. Usage of Oracle Big Data SQL (3.1) for data servicing of a new generation of Spark/ML and SparkLyR context analysis over sports Data. Publication of data from Hive database , with transformations over collected data in SOLR search, for abnormal pattern detection. Solution TPOC expanded into an AWS Solution further in the pipeline.
7. Lead Architect for the new DAZN EDW solutions, coordinating the teams to scale a new platform for AWS Cloud with Big Data using solutions, AWS Data Lake formation with AWS Glue, AWS RedShift and Spectrum, AWS EMR, AWS Kinesis. Solution further expanded on my recommendation with Snowflake Data Warehouse in AWS as elastic/scalable replacement for Redshift.

- Senior Software Developer - EDM Big Data

(From January 2015 – October 2015)

SKY , CBS - EDM Osterley (<https://corporate.sky.com/contact-us>) (Permanent)

Business or sector: Systems Migration from Cloudera CDH 4.3 to Cloudera CDH 5.2 with ETL and CRM techniques for Media and Core product content Analytics.

Technologies used:

14. Designing ETL Solutions with Apache Spark 1.3 and production of insights for ElasticSearch 2.3.4 and Kibana

3.0.x.

15. Designing of ETL applications with Scalding and Cascading in Scala and using their core API for MapReduce 1.0 .
16. Design of new Flume agent ingestion processes, from near real-time data updates to Hadoop data sinks.
17. Big Data analytics with Cloudera CDH 4.3 and CDH5.2 in Hadoop ecosystem using Hadoop Streaming API for Scalding and with Cascading. Usage of Scoop connections for data ingestion from Oracle dataBases, Netezza and ABN Issue . Also implement analytics Jobs with scripting in PIG, HIVE and Impala.
18. ETL processing and BI analysis using Python UDF(s) in HIVE .
- 19.** Restful API implementations, for data consumption and ingestion to data sinks. (FLUME with Plugging ingestion of HTTP consumers)

Project roles :

8. Development of a new solution for ETL on Mobile visualized content. Used JSON, CSV and XML ETL and parsing tools of Cascading and Scalding.
9. Prepare and migrate data products in between Cloudera CDH4.2 and Cloudera CDH5.2.
10. Daily support of production data and analytics.

- Software Consultant Big Data Analytics, Cloudera CDH

(From November 2014 – to December 2015)

Contractor from Gravitas for (QUDINI) (Contractor)

Business or sector: Systems design and migration from Cloudera CDH 4.3 to Cloudera CDH 5.2 with ETL techniques for Product content Analytics and CRM data. .

Technologies used:

20. Big Data analytics with Cloudera CDH_5.1 , Hadoop ecosystem using Scoop connections and doing analytics with scripting in PIG, HIVEQL and Impala.
21. ETL processing and BI analysis using Hive with Python UDF(s) and HIVEQL.
- 22.** SOA implementation with J2EE framework, web Services in Struts and Spring API.

Project roles :

11. Design and implementation of a new Hadoop Cluster for a Startup company, specialized in software for Restaurant Queue Management in London. Design of the solution using Cloudera CDH5.1 and implementation of packages, Hadoop, Yarn, MapReduce 2, Hive, Impala, Sqoop, HBase.
12. Project not finished due to issues in Startup.

- Software Systems Data Analyst and Senior Software Developer / Analyst

(From May 2010 – to October 2014)

Fidelity Global, EMEA Watford (www.fisglobal.com/EMEA/UK) (Contractor)

ImpactZero Software (www.impactzero.pt) (Senior Software Analyst)

Business or sector: Systems Migration with ETL and CRM techniques for Core Banking, customer data and transactional data from payment systems. New data transformation processes for funds in-clearing and migration payment redirections in domestic and international schemas as FPS, BACS, CHAPS, SEPA and following standard formats SWIFT MT103 , BACS AUDIS and BACS ADDACS DDI. Product development and life cycle support for Business and Current account products.

Technologies used:

23. Primarily SOA implementation with J2EE framework, web Services in Struts and Spring API.
24. For migrations also some Big Data analytics with PostgreSQL, MySQL, MongoDB first and further expansion in 2013/2014 with Hadoop/Hive ecosystems using Swoop connectors to relational systems , to do analytics

with scripting in PIG, HIVEQL and Scala/Scalding.

25. ETL processing and BI analysis using Hive with Python UDF(s) and HIVEQL .

Project roles :

13. Systems and Data Reporting Control Analyst in projects for Barclays Direct formerly known ING Direct UK. Data Quality check for Data Warehousing, Business Intelligence and Customer Relationship management.
14. MDM Analysis, Design of processes on business requirements with technical implementations for Data Migration in Core Banking applications. Active participation in integration discussions and cross-functional issues resolution control. Active participation in all the different stages of the migration project: requirement gathering, analysis, build, implementation, system testing and performance control. Participation on the go-live and coverage of data migration.
15. Technical specialties: 4+ years of experience in Banking Software Solutions, performed different roles and tasks, from Functional, Technical Analysis, Build and Implementation. Covered several domains, such as Core Banking CRM, B2C/B2B, Web Services, SOAP, SOA, Transactional Data Capture and Historical log processing. Use RPC techniques and technical solutions as :
 1. Implement xml parsers for ISO 20022 message standard and SEPA payment exchanges.
 2. Develop xml parsers for real-time customer SMS, using connector IBM WebSphere MQ V7.0 client components.
 3. Develop new core product processes using Web services with Struts, and Spring API for Customer bank applications using SOAP MEP patterns.
 4. Develop new business account product in FIS Profile Core banking : Front-end in Java (Web Services or SOA) and back-end in GT-M VM, scripting in KSH for AIX console.

- Software Analyst, Developer and Tester

(From June 2008 – to April 2010)

T-Systems Iberia Barcelona / D-Core Lisbon (www.t-systems.pt) .

Started as a junior software analyst and developer.

Worked in SLI (Sales system) applications for VW UK and VAESA.

Business or sector : Analysis, Development and Software Testing using ETL techniques for car sales systems.

Technologies used:

1. ETL Technologies in the Mainframe zOS ecosystem using COBOL, JCL and CICS.

Project roles :

1. Actively participate in the different stages of the project : analysis, build, testing and implementation.
2. Actively participate in new ETL processes for Migration in between Mainframe systems (From VAESA in Spain to VW UK in Wolfsburg).
3. Development of new BI and SLI logic customised to RDD of UK customers (VW-UK) .
4. Use technologies for process control and Data : JIRA and HP Quality Centre.
5. Use technologies for data ETL: Mainframe host with COBOL, JCL, CICS and DB2 database.
6. Development and testing control of SLI BI using Java Swing interfaces.

EDUCATION AND TRAINING

- Cloudera Data Science Training . London UK : (2016 -)

1. The fundamentals of Cloudera Big Data Lake.
 2. Fundamentals of Data Science with Python, and R.
 3. Practical use case analytics using ALS recommendation model.
 4. Comparative analysis of models using R plotting, via ggplot2 and rCharts.
 - **Cloudera Administration Training. London UK : (2016 -)**
 5. The fundamentals of Cloudera Big Data Lake.
 6. Setup of a 5 Nodes Cluster using AWS and EMR.
 7. Scale of a Cluster and setup of Services in a Cluster.
 8. Root cause analysis for issues and problems in a cluster.
 9. Scalability in a CDH cluster, adjust Dynamic Pool of resources and Static Pool of resources.
 - **Cloudera Data Analyst Training. London UK : (2014 -)**
 - 10.The fundamentals of Apache Hadoop and data ETL (extract, transform, load), ingestion, and processing with Hadoop MapReduce and tools
 - 11.Organizing data into tables, performing transformations, and simplifying complex queries with Hive
 - 12.Joining multiple data sets and analysing disparate data with Pig
 - 13.Performing real-time interactive analyses on massive data sets stored in HDFS or HBase using SQL with Impala.
 - 14.Connectivity of Hadoop HDFS and Oracle 11g or MySQL using Sqoop.
 - **Continuous Training in FIS Profile Technologies. FIS – Fidelity Global : (2010 - 2014)**
 1. Training in Core Banking B.I. - Data ETL and CRM . Usage of Falcon Fico , Experian extraction and IBM Cognos.
 2. Training in Core Banking technical solutions from FIS Global.
 3. Currently also doing training for junior resources on-site and off-shore.
 - **Training in z-OS Mainframe Technologies.T-Systems - IBM Portugal : (2008 - 2009)**
- Training for integration in T-Systems project. IBM Mainframe z/OS modules :
- ES10 – Fundamental System Skills in Z/OS.
 - AD40 – COBOL Programming Fundamentals.
 - CF82 – DB2 Programming Workshop for Z/OS.
 - CI01 – CICS Fundamentals.
 - CI17 – CICS Application Programming I.
 - CF96 – DB2 for z/OS Application Performance and Tuning.
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- **Studies in Mathematics and Computer Science**

Universidade Do Minho, Braga Portugal : (2002 - 2007)

Studies this Mathematics and Computer Science 5 year plan. An pre-Bologna Education Agreement plan with Studies in Mathematics and Advanced Software Engineering. It included advanced imperative and functional language

paradigms, knowledge representation, artificial intelligence and modern distributed systems architectures. During this period have learned to work in Unix systems and software development in technologies JAVA6, Scala, Python, R, Bash, Perl, Erlang, Haskell, C, C++ . The program of degree was highly oriented to project development from requirement gathering and analysis to implementation and product implementation and ownership.

PERSONAL SKILLS

Mother tongue(s) Portuguese

Other language(s)	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C2	C2	C2
Spanish	B2	B2	B2	B2	B1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Communication skills

Good communication skills gained through my experience as a resource on customer and representing the company in requirement gathering meetings, major problem resolution meetings and in continuous support meetings.

Organisational / managerial skills

Leadership positions :

- For GFT Group UK - Lead of a first Azure Kubernetes project, with implementation of solution with security principles and CI/CD Azure Pipelines. Coordinate the team expansion and growth with an NearShore in Poland.
- For Perform Media Group (now DAZN Group) was the Head of BigData. I did mentoring of teams in the space of Big Data technologies, conducted team knowledge refresh sessions and conducted the adoption of Big Data frameworks like Spark, managed near-shore teams in Poland (Katowice) and in Slovakia (Kosice).
- For FISGlobal / ING Direct did team integration via phone and video conference calls, as currently responsible for a small team of 5 people in between on-site (UK Reading) and off-shore resources (India Bangalore).

Job-related skills

Highly skilled in software development life cycle, for Media systems in the big data stack also before in the maintenance, support, builds and packaging of core banking software solutions (responsible in FIS team for software life cycle maintenance and production deployment, including migration and services closure).

Computer skills

Full domain of JIRA Agile Project management tool. Full domain of test management HP Quality Center. Full domain of Microsoft Office tools as Visio, Excel, Word and Project. Software development with in SOA, Java Web Services, MySQL, PostgreSQL, banking product development. Also knowledge in scripting for UNIX / AIX and Z/OS systems using Bash, KSH and JLC.

Other skills

Storytelling skills / Soft skills, capable to communicate ideas and manage the art of communication in holistic human side. Worked in the family business (in accountancy and stock management areas). Cyclist on free weekends in both road and mountain, also a daily office commute when cycling is possible.

Driving licence

Driving Licence, category B



The World's Local Training Provider

course completion

CERTIFICATE

has been presented to

Joao Cerqueira

for the completion of

Domain Driven Design - bespoke

Trainer

Antonio Radesca

Venue

London

Duration

1 Day

date of issue:

2019-06-24

e-certificate:

<https://cert.nobleprog.com/authenticate>

Certificate ID: 586523

Authentication Code: cde51



Certificate of Attendance

is hereby granted to

Joao Cerqueira

To verify that he/she has attended

**Data Science at Scale
using Spark and Hadoop**

A handwritten signature in black ink that reads "Sarah Spiegel".

VP, Educational Services

Cloudera, Inc.
www.cloudera.com

October 5th 2016

Course Date



Certificate of Attendance

is hereby granted to

Joao Cerqueria

To verify that he/she has attended

**Cloudera Data Analyst Training:
Using Pig, Hive, and Impala with
Hadoop**

A handwritten signature in black ink that reads "Sarah Spiegelman".

VP, Educational Services

Cloudera, Inc.
www.cloudera.com

August 12-14th

9AM-5PM

Date



Oracle Cloud Customer Connect

Certificate of Achievement

Presented to

Joao Cerqueira



Congratulations! Through your contributions to the community, you have earned the Green Ribbon badge.

We truly appreciate you sharing your knowledge and expertise with the community,
and we look forward to seeing even more of your valued posts!

January 01, 2019


Jeff Caldwell
Community Director



ORACLE®
Cloud Customer Connect

Certificado



A Companhia IBM Portuguesa, declara, para os devidos efeitos, que:

João Pedro Afonso Cerqueira

frequentou o(s) seguinte(s) Curso(s):

CÓDIGO	DESCRIÇÃO	INÍCIO	FIM
ES10	Fundamental System Skills in z/OS	03-07-2008	09-07-2008
AD40	COBOL Programing Fundamentals	10-07-2008	15-07-2008
CF82	DB2 Programming Workshop for z/OS	16-07-2008	18-07-2008
CI01	CICS Fundamentals	21-07-2008	22-07-2008
CI17	CICS Application Programming I	23-07-2008	28-07-2008
CF96	DB2 for z/OS Application Performance and Tuning	29-07-2008	01-08-2008

Os cursos decorrem no horário das 9:30 às 12:30 e das 14:00 às 17:30, em dias úteis.

A handwritten signature in blue ink, appearing to read "Carlos Ved".

Carlos Ved
IBM Learning BTO Delivery Leader



Universidade do Minho
Serviços Académicos

Carla Isabel Pereira Lavrador, Registrar of the University of Minho, hereby certifies, according to University records, that João Pedro Afonso Cerqueira, born in the parish of Caldelas, in the county of Amares, in the district of Braga, son of Joaquim Jorge Mota Cerqueira and of Maria da Conceição Silva Afonso Cerqueira, obtained the following passing grades in the "Licenciatura" in Computer Science:

Course Unit	Regime (1)	Type (2)	Academic Year	PT Mark (3)	ECTS Mark (4)	Credits (5)	Obs. (6)(7) (8)
Linear Algebra	1	Ob	2002/2003	10	E	5.0	
Calculus	1	Ob	2002/2003	10	E	5.0	
Discrete Mathematics I	1	Ob	2002/2003	10	E	6.0	
Discrete Mathematics II	2	Ob	2002/2003	11	D	3.5	
Programming Paradigms II	2	Ob	2002/2003	10	E	3.5	
Programming Paradigms I	1	Ob	2003/2004	12	C	3.5	
Analysis	2	Ob	2003/2004	11	D	5.0	
Linear Algebra and Analytical Geometry	2	Ob	2003/2004	13	C	8.0	
Programming Paradigms III	1	Ob	2003/2004	10	E	3.5	
Automata and Turing Machines	2	Ob	2003/2004	11	D	3.5	
Computational Mathematics	2	Ob	2003/2004	10	E	4.0	
Programming Paradigms IV	2	Ob	2003/2004	12	C	3.5	
Topics in Analysis	1	Ob	2004/2005	10	E	4.0	
Computer Architecture	2	Ob	2005/2006	13	C	3.5	
Numerical Analysis II	2	Ob	2005/2006	10	E	6.0	

(1) – Regime: A – Annual

1 – 1st Semester

2 – 2nd Semester

(2) – Type: Ob – Compulsory

Op – Optional

(3) – Grade: On a 0 to 20 grading scheme, a minimum grade of 10 in each course unit is necessary to pass.

(4) – ECTS Grading Scale

ECTS Grading Scale	% of approved students
A	10
B	25
C	30
D	25
E	10

In order to establish the course units grades for each group of the ECTS grading scale, the distribution of students with passes in the previous five academic years and/or in a total of at least thirty students is taken into consideration. When a cohort of this scale is impossible, the ECTS grading scale is replaced by the use of an institutional conversion table based on all course units grades of all University of Minho's Degree Courses from the previous five academic years. It is important to notice that not all groups of the ECTS grading scale might be represented.

(5) – ECTS Credits: 1 academic year = 60 1 semester = 30 1 term = 20

(6) – Course units subject to academic recognition

(7) – Extracurricular course units

(8) – Curricular units accredited by demonstration of professional competence and/or other training

This same certificate carries the embossed seal of this University.

The Registry of the University of Minho, on the 25th of July, 2014.

The Registrar,