

Data Scientist training – RNCP level 7 certification

From March 2021 to February 2022 – OpenClassrooms in partnership with CentraleSupélec

- Summary:** Data Scientist training with courses in partnership with CentraleSupélec, mentoring sessions and support for 8 corporate projects. Diploma training with the obtaining of a RNCP level 7 certification (bachelor's degree+5 years) in Data Science.
- Role:** Student of the OpenClassrooms Data Scientist training.
- Achievements:**
- **Project 1** (« Define your learning strategy »).
 - **Project 2** (« Analyse data from education systems ») :
Perform an exploratory data analysis (EDA) of the World Bank's educational data to determine in which countries an on-line training start-up may develop.
 - **Project 3** (« Design an application for public health ») :
Realization of uni-variate and multivariate statistical analyses, data cleaning (processing missing values, outliers) from Open Food Facts data.

Analysis of the dataset variables relevance with graphical representations in order to create a "Nutri-kidney" application to evaluate food quality (based on Nutriscore) for patients with renal insufficiency.
 - **Project 4** (« Anticipate the electrical consumption needs of buildings ») :
Completion of an exploratory data analysis (EDA), feature engineering, implementation of a supervised machine learning model to predict the electricity consumption and CO2 emissions of the city of Seattle, hyper-parameters settings, evaluation of model performance.
 - **Project 5** (« Segmentation of customers of an e-commerce site ») :
Performing data preprocessing, setting up an unsupervised learning model (customer segmentation model to guide site communication), hyper-parameters setting, evaluating model performance, simulation to define model maintenance delay.
 - **Project 6** (« Automatically classify consumer goods ») :
Completion of a feasibility study for a classification engine based on object text descriptions and object images in order to automate the assignment of object category.

Text and image preprocessing (stemming, lemming, vectorization, NLP approach for text, image resizing, contrast adjustment, features extraction by Transfer Learning on neural networks VGG16 / ResNet50 for images), PCA dimension reduction, k-means clustering, TSNE visualization.
 - **Project 7** (« Implementation of a scoring model ») :
Building a scoring model to predict a customer's failure probability for financial institution loan approval / refusal from a bank and building an interactive dashboard for customer relationship managers to interpret predictions model and improve customer knowledge.

Data preparation and exploratory data analysis from an existing Kaggle kernel,

custom metric implementation to evaluate the model (net income function), probability threshold adjustment, methodological note writing, dashboard deployment in the cloud.

- **Project 8** (« Deploy a model in the cloud ») :

Image data processing chain development (preprocessing, dimension reduction) as part of a mobile application to classify fruit/vegetable images according to their photo and to give information about the fruit/vegetable.

Processing chain implementation from the Apache Spark ML framework (distributed calculations) and PySpark API and deployment in AWS Big Data architecture (S3, Sagemaker).

Tools used:

Anaconda, Jupyter notebook, Python (Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn), ML Python libraries (Plotly, Yellowbricks, SHAP), Neuro computing (CNN VGG16, ResNet50, Keras, TensorFlow), pattern recognition NLTK, AWS Big Data architecture (IAM, S3, EC2, Sagemaker), Heroku application server, ML framework (Apache Spark, Pyspark), Streamlit, Flask.

French Ministry of Armed Forces / SIGLE project for French Navy

From February 2020 to October 2020 – Sopra Steria Group

Summary:

Team integration for third party application maintenance of SIGLE project. Maintenance Repair and Operations (MRO) for French Navy information system (Corrective and evolutionary maintenance for BI systems, support to development teams).

Role:

Functional and technical leader in BI domain.

Achievements:

- MRO – corrective and evolutionary maintenance (fault analysis in test and production, patches development)
- Conduct assistance and data adjustments.
- Achievements for virtualization projects: SAP BI version upgrade, Talend jobs migration for Oracle version upgrade (Oracle 18c).
- Patches development / new developments for Talend jobs, SAP BI universes and Webi reports.
- Deliveries packaging.
- Preparation et facilitation of BI domain committees.
- Technical recommendations on the supervision of the BI systems operating processes.

Tools used:

Talend TOS 7.1.1, SAP BI 4.2 SP7 (Webi, UDT), Oracle 12/18c, HP ALM.

French Ministry of Armed Forces / Brasidas project - Aeronautical MRO redesign

From October 2019 to January 2020 – Sopra Steria Group

- Summary:** Aeronautical MRO (Maintain, Repair and Operations) redesign. Pre-sales on performance management and financial programming for different domains (maintenance, logistics, purchasing, ...) of French air force information system.
- Role:** Pre-sales engineer in BI domain.
- Achievements:**
- Participation with meetings with software vendors (SAP, Opus, Qlik) to align the customer's expectations with the client's needs.
 - Proof of Concept (POC) preparation with software vendors.
 - Setting benchmarks on the following tools (SAP BI Suite + SAP Lumira + SAP BW/4Hana, SAP BPC, Opus tools suite, Qlik Sense) in Performance Management and Financial Programming domains (programming in the areas of finance, maintenance activities, logistics, purchasing, etc. in relation to the customer's technical and functional requirements).
 - Participation in the technical solution and business proposal drafting.
- Tools used:** SAP BW/4Hana, SAP BPC 11, SAP BI 4 (Webi), SAP Lumira, Qlik Sense, Opus Suite (Opus10, Simlox, Catloc).

La Banque Postale (french bank) / IT teams support - RDJ accounting flow

From October 2016 to September 2019 – Sopra Steria Group

- Summary:** IT teams Support in Sopra Steria's Core Banking service center. Corrective and progressive maintenance for RDJ accounting flows (accounting flows for IFRS9 accounting method) of Run (production) and Build developments.
- Role:** Front and Back Office IT teams support, relationship with development teams.
- Achievements:**
- Needs analysis.
 - Conducting workshops with IT teams / product management.
 - Back and Front Office costing.
 - Design of new accounting interpretation rules (with AI Suite tools - RDJ (Rules of the Game)) of NEO (My French Bank) and IFRS9 (french accounting method) projects.
 - Review and qualification of developments.
 - PMO acceptance and assistance to project ownership.
 - Delivery control.
 - Delivery of software components to project management.
 - Maintenance in operational condition and incidents management.
- Tools used:** TSO, EGEN, Armide, Axway AiSuite (Composer, Designer, Sentinel, Datastore, Interplay components).

La Banque Postale (french bank) / PMO assistance in insurance domain

From October 2013 to September 2016 – Sopra Steria Group

Summary: P assistance, functional and technical acceptance tests on savings and retirement insurance Java applications.

Role: PMO assistance, functional and technical acceptance tests.

Achievements:

- Preparation of acceptance tests referential.
- Writing of test cases files.
- Incidents analysis and follow-up.
- Java logs analysis.
- Updates of technical specifications.
- Interface with project ownership, CNP Assurances project management (partnership of Banque Postale), CDM (Banque Postale entity in charge of software developments) and external teams.

Tools used: Java J2EE, IBM RTC, DB2, UML.

Pôle Emploi (french employment office) / HP ITSM integration

From June 2013 to September 2013 – Sopra Steria Group

Summary: Corrective and progressive maintenance on HP ITSM (SM9) incidents tracker tool.

Role: Software integrator.

Achievements:

- Participation in corrective and progressive maintenance of 13P10 project (new functions development, JavaScript code) from specifications.
- Participation in operational monitoring committees of 13P10 project.
- Writing of acceptance tests referential with Excel for unit tests.
- Update of development and acceptance tracking documents, specifications documents.
- Corrective maintenance and qualification / analysis and follow-up of anomalies under Teamtrack.
- Level 3 support.

Tools used: HP ITSM (SM9), TeamTrack, Unix Aix, Oracle database.

CETE Sud-Ouest / RPLS BI project analysis and design

From October 2012 to May 2013 – Sopra Steria Group

Summary: Analysis, design, development, functional acceptance of the 2012 and 2013 software evolutions about BI application relating to data identifying housing stock for social housing rental companies.

CETE Sud-Ouest is an entity of french Sustainable Development Office.

Role: BI Analyst.

Achievements:

- Workshop facilitation with product managers.
- Modeling and development of data marts.
- Update of ETL specifications for data warehouse and data marts loadings.
- Update of technical design documents for BO universes and Webi reports.
- Modifying BO universes.
- Writing of acceptance tests with HP ALM.
- Execution of test scenarios with HP ALM.

Tools used: Talend TOS v4.3, BO XI R2 et XI 3.1, BO Designer, Webi, Oracle 11g R2, HP ALM (HP QC 11).

EDF (french electricity company) / Functional analysis and operational management

From October 2011 to September 2012 – Sopra Steria Group (Pricer project)

Summary: Functional analysis and assistance for EDF Pricer project ownership team and third-party applications maintenance development team, operational management on a pricer / scheduler tool for valuation, optimization and estimation of EDF commercial offers.

Role: Functional analysis and operational management.

Achievements:

- Facilitation of functional workshops with project ownership and needs analysis.
- Functional support for project ownership and third-party applications maintenance development team.
- Costing of developments.
- Writing of detailed functional specifications.
- Writing of acceptance test cases referential with Excel.
- Operational management for pricer/scheduler software version with budget, risk task and acceptance test monitoring, resource and schedule management, preparation of weekly operational committees, and direct reporting to the project manager.

Tools used: Siebel, Java J2EE, Eclipse, Oracle 10g.

EDF (french electricity company) / BO Inventaire project – BI expertise

From June 2011 to September 2011 – Sopra Steria Group

- Summary:** Functional support for BO (BI tool) development teams and expertise on the "BO Inventory" project (nuclear waste inventory).
- Role:** Business Objects expert.
- Achievements:**
- Participation in functional specifications on developments in the "BO Inventory" project.
 - IT development on existing BO reports and new BO reports.
 - Design and writing test scenarios under HP QC 10.
 - Running tests under HP QC 10.
- Tools used:** BO XI R3 SP2.1, HP QC 10, Oracle 10g.

CETE Sud-Ouest / RPLS BI project analysis and design

From February 2010 to June 2011 – Sopra Steria Group

- Summary:** Analysis, design and production of RPLS BI application for the census of the rental housing stock of social housing providers.
- Role:** BI analyst.
- Achievements:**
- Needs analysis.
 - Workshops facilitation.
 - Data warehouse and data marts modeling (1 statistical data mart and 1 data mart for operational control and data extractions).
 - Drafting of analysis documents and general specifications.
 - Drafting of ETL specifications.
 - Drafting of technical design documents for BO universes and Webi reports.
 - Participation in ETL developments.
 - Development of additional BO reports for regulatory extractions and customized reports for social housing agencies.
- Tools used:** Talend TOS v4.3, BO XI R2 et XI 3.1, Designer BO, Webi, Oracle 11g R2.

Rectorat de Bordeaux / Project manager support for PIAD BI platform

From December 2006 to February 2010 – Sopra Steria Group

- Summary:** Project management support for the operation of the PIAD BI platform, which guarantees the technical architecture, infrastructure and technical integration of academic and national developments.
- PIAD is an entity of educational authorities of Bordeaux (Rectorat de Bordeaux): this entity depends on french Ministry of Education.
- Role:** Project management support.
- Achievements:**
- BI national projects technical integration achieved by internal (academies) and external (service providers) teams.
 - Technical acceptance: control of ETL pipelines processing, verification of universes and data marts compliance, BO requests performance tests and optimization.
 - Support for the operation of the technical platform: setting up acceptance environments, production of national BI applications, DB2 databases administration (monitoring and tuning), drafting of technical documentation.
 - Participation in the technical platform development: BO V6.5 migration to BO XI R2, migration from DB2 UDB v8.2 to DB2 V9, specific KM (Knowledge Modules) development for the Sunopsis / ODI ETL, tests and bench marking on data compression, parallel queries and DB2 federated databases.
 - Level 1 and 2 user support for support requests analysis and qualification about problems related to the operation of the ETL Sunopsis / ODI tool, DB2 databases (monitoring) and BO (operation and management of Webi servers, monitoring).
 - Academic and national development teams support for BI projects on DB2, ETL, BO aspects (BO queries tuning, BO Designer, universe design and reports expertise), interface with software publisher teams (IBM, Oracle, BO) and with systems and networks teams of educational authorities of Bordeaux (Rectorat de Bordeaux).
- Tools used:** Linux RedHat, Sunopsis V3, ODI (Oracle Data Integrator) V10.1.3.x, DB2 V9, BO (Business Objects) V6.5 et XI R2, Tarentella Nagios, Linux shell scripts (bash, sed, awk, perl).

Neuf Telecom / Project management support – Accounting IT system migration

From February 2006 to December 2006 – Sopra Steria Group

- Summary:** Project management support on the convergence of financial and accounting flows between Cegetel's IT applications and the accounting management tool Arcole of Neuf Telecom.
- Neuf Telecom and Cegetel are phone companies. Cegetel merged with Neuf Telecom in 2008.
- Role:** Project Management support.
- Achievements:**
- Writing functional and technical specifications.
 - Development of interfaces in the form of ETL pipelines or processing chains between the Cegetel IS (Clarify, SAP,...) and the Arcole accounting management

tool (Ares) of Neuf Telecom.

- Integration of Cegetel's financial flows and revenue into the target Information System (Arcole).
- Industrialization of production processes.
- MRO (Maintenance, Repair and Operations) on ETL processing chains integration.
- Technical and functional support for users.
- BO reports (dashboards on operation monitoring of financial flows integration) from BO universe.

Tools used: Oracle 9i, Sunopsis / ODI ETL, Unix HP-UX, shell scripts Unix, BO V6.5.

TIMEG / Software package maintenance for asset management application

From November 2002 to October 2005 – TIMEG

Summary: Corrective and progressive maintenance of the TechBase Patrimoine real estate management software (asset management) and database administration.

Role: Computer analyst designer, DBA for Oracle databases.

Achievements:

- Analysis and design in the context of corrective/progressive maintenance: developments in the Contracts module for data logging relating to types of areas/provisions for rental charges, developments in the Administrative Management module for ICPE (classified installations for environmental protection in English) and risks, designing interfaces with external applications (LOGI and ESTIA software).
- Writing of general and detailed specifications.
- User documentation updates.
- Software package analysis and redesign as part of its internationalization, with multi-language management, impact analysis with Visual Expert tool (tool used in PowerBuilder environment).
- Software package analysis and technical migration from PowerBuilder V6.5 to PowerBuilder V9.
- Scenarios design for non-regression tests as part of TechBase Patrimoine software package migration in .Net Language. Writing of test acceptance in English.
- Drafting of technical recommendations on Oracle databases monitoring in the customer environment, procedures for databases backup/restoration.
- PowerBuilder developments : use of PFCs, datastores, application of object programming principles (inheritance, NVO,...), interfaces developments, module evolution, modeling, specific developments.
- Oracle DBA tasks: stored procedures, pl/sql packages developments, integration of SQL loader loading.
- User and production teams support.
- Deliveries packaging.
- Project manager assistance: anomalies analysis, developers assignment, bug correction progress monitoring (team of 5 developers).

Tools used: Oracle 7/8/8i/9i, PL/SQL, PowerBuilder V6.5 and V9, .Net, C#, Visual Expert.

Hachette Filipacchi Média / CYPRES / LOANA software maintenance

From January 2002 to October 2002 – SPO (freelance administration company)

- Summary:** Progressive maintenance for CYPRES software module (general and analytical accounting for Hachette group) and LOANA software module (BI application for Hachette group's financial management).
- Hachette Filipacchi Média is a magazine publishing company, including Disney commercial license.
- Role:** Computer analyst designer, software developer.
- Achievements:**
- Progressive maintenance for LOANA application module: analysis and design for a calculation engine used to multi-axis and multi-dimensional dynamic reporting generation.
 - Development of calculation engine with Oracle PL/SQL packages for LOANA application.
 - Progressive maintenance for CYPRES application: developments on re-billing, reciprocal services and associated settlement flows between the companies of the group, with Oracle Developer 2000 (Forms 4.5 and Report 2.5), from detailed specifications.
- Tools used:** Oracle 7/8, PL/SQL, Oracle Forms 4.5, Oracle Report 2.5, Unix HP UX.

IBM Global Services / Development software for IMOTEP project

From September 2001 to December 2001 – SPO (freelance administration company)

- Summary:** IMOTEP project Members module development, an online insurance web site.
- Role:** Software developer.
- Achievements:**
- Presentation layer development (dynamic HTML pages) with the XGC IDE (C language code generator) under Irida multi-media monitor (X25, HTTP, FAX,...), from IBM specifications.
 - Development of DRI servers data access (DB2 database) in C language.
 - Unit, non-regression and integration tests on developments about Members module.
- Tools used:** Irida 5.3, DB2 7.01, Unix AIX.

Bull Integris / Analysis, design and development for NAFI project

From May 2001 to August 2001 – SPO (freelance administration company)

- Summary:** Interfaces design and development in Oracle Pro *C as part of NAFI project for

accounting flows convergence between Club Med IS (Information System) and Jet Tours IS.

Bull Integris was a french IT services company, Club Med and Jet Tours are tour operators and hotel companies.

Role: Computer analyst designer and software developer.

Achievements:

- Drafting of general and detailed specifications, analysis for accounting positions mapping between Jet Tours and Club Med accounting.
- Interface developments in Oracle Pro *C between the 2 accounting systems, with some developments in Oracle Developer 2000.

Tools used: Unix HP-UX, Oracle Pro *C, Oracle Developer 2000 (Forms 5.0).

Viveo Assurances / Operational management for ARTHUS project

From December 2000 to April 2001 – SPO (freelance administration company)

Summary: Analysis, design, development and operational management for reinsurance module creation in the Arthus software package for providing and health insurance.

Viveo Assurances was a software company in insurance.

Role: Computer analyst designer, developer and operational management.

Achievements:

- Reverse engineering of the existing solution and back-documentation.
- Data model modeling with AMC Designor.
- User interviews, needs analysis, drafting of general and detailed specifications.
- Participation in Oracle Forms 3.0 and Unix developments (30% of total time).
- Technical supervision of a team with 4 engineers, tasks assignment, developments progress follow-up, direct reporting with the product manager.
- Complete acceptance of the Reinsurance module.

Tools used: SCO Unix, Oracle Forms 3.0, AMC Designor.

Accenture / Development and integration for MISTER TED project

For May 2000 to November 2000 – SPO (freelance administration company)

- Summary:** Development of the B-to-C component (application management and monitoring) for MisterTed online recruitment website in a multi-cultural team (Indian, Anglo-Saxon, French people).
- Role:** Developer and software integrator.
- Achievements:**
- ColdFusion developments on application management and site administration, from Accenture detailed specifications.
 - Audit and code review of the Indian team present on site.
 - Skills transfer to MisterTed project team.
- Tools used:** ColdFusion 4.5, Oracle 8i, Javascript, Vbscript, HTML, Netscape web server.

France Télécom Mobiles / Design and development for MAGICS project

From February 2000 to April 2000 – TECSI (french IT services company)

- Summary:** Flow monitoring module design for Magics application from France Telecom Mobiles to manage customer relations-suppliers about SIM cards supply (order triggering, inventory management, supplier management).
- France Télécom Mobiles was a french mobile phone company, before Orange company.
- Role:** Computer analyst designer and developer.
- Achievements:**
- Flow monitoring module analysis and design for the SIM cards supply (order triggering monitoring, inventory management, supplier management, summary dashboard design, graphical monitoring system design for exchanges and flows between France Télécom Mobile entities and its suppliers and a mechanism for triggering stock alarms).
 - Developments with PowerBuilder V6.5.
- Tools used:** PowerBuilder V6.5, Oracle 8, Windows NT.

EDF GDMI / SIQUAEL project Third Party Application Maintenance

From April 1999 to January 2000 – TECSI (french IT services company)

- Summary:** As part of the SIQUAEL Third Party Application Maintenance (TPAM), corrective and progressive maintenance for a national risk management application on the EDF power grid.
- GDMI is an entity of EDF for electrical infrastructure management.
- Role:** Computer analyst designer and developer.
- Achievements:**
- Needs analysis.
 - Drafting of detailed specifications and cost estimate.
 - TPAM: corrective and progressive maintenance, preventive studies.
 - Shell scripts Unix developments for operating procedures with Oracle Developer 2000 (Forms and Report).
 - Software evolution deployment with scheduler tools (patches execution with Unix shell scripts).
 - Complete acceptance of developments.
 - Database administration (hot database administration, stored procedures development).
- Tools used:** Unix AIX, Oracle 7, Oracle Developer 2000 (Forms, Report), Bourne and Korn shell.

EDF GDMI / MERLIN project development

From November 1998 to March 1999 – TECSI (french IT services company)

- Summary:** MERLIN project progressive maintenance about the management of water quality information used in nuclear power plants.
- Role:** Software developer.
- Achievements:**
- Forms and reports development (input screens, summary tables, consolidation reports, comparison charts) based on detailed EDF specifications.
 - Developments with Oracle Developer 2000 (Forms, Report, Graphics).
 - Unit/integration tests on developments.
- Tools used:** AIX Unix, Oracle 7, Oracle Developer 2000 (Forms, Report, Graphics).

La Banque Postale / SOFI project integration and deployment

From February 1998 to October 1998 – TECSI (french IT services company)

- Summary:** Technical components integration and SOFI1 application deployment (application for the processing of bank cheques by digitization) in the various CRSF (Regional Financial Services Centers in English).
- CRSF are Banque Postale entities for financial services in regions.
- Role:** Technical integrator.
- Achievements:**
- Skills transfer between NCR/Cap Gemini (integrator) toward Banque Postale teams (writing technical documents, installation procedures).

- Interfaces design and development between SOFI1 apps and banking mainframe world via WallData and Rumba software solutions.
- Designing and writing user training on SOFI1 apps.
- Server preparation and pre-installation on a deployment platform, components integration.
- On-site application installation in CRSF, training bases and production systems installation for cheques digitization, integration with other Banque Postale projects.
- Operating procedures development on Unix servers.
- User support in CRSF.
- CRSF staff training on SOFI1 apps.

Tools used: Sun Solaris, Informix, Unix scripts shell, SQL, MQ Series, Visual C++, WalkImage NCR image processing package.

Debitel / Customer services analysis and design

From November 1997 to January 1998 – OSIS (IT consulting company)

Summary: Customer services design and development for an interactive voice server of a telecommunications operator.

Debitel was a German phone mobile operator, subsidiary of Mercedes-Benz.

Role: Technical integrator.

Achievements:

- Customer services analysis and design for consumption monitoring and PIN code consultation about individual customers.
- Drafting of general and detailed specifications.
- Oracle PL/SQL packages development (stored functions and procedures).
- Disseminate the results in Debitel web applications, by making development available as PL/SQL cartridges in Oracle Web Server.

Tools used: Unix, Oracle V7, PL/SQL, PRO*C, Oracle Web Server.

FRED / Development – Inventory management tool redesign

From October 1997 to October 1997 – OSIS (IT consulting company)

Summary: Participation in new inventory management tool development for the Fred jeweler.

Role: Developer.

Achievements:

- Participation in coherence layer development in order to improve stocks visibility and to guarantee stock movements.
- Active X controls development with Visual Basic.
- Stored procedures development with SQL Server.
- Unit and integration tests.

Tools used: Windows NT, Visual Basic V5.0, Microsoft SQL Server V6.5.

ATLANTICA / Technological watch for BAM project

For April 1996 to September 1997 – ATLANTICA

Summary:	<p>Technological watch and developments for Crédit Agricole's BAM project (Multiple Access Bank in English) framework, online banking service implementation on the web channel.</p> <p>Atlantica is a group of Crédit Agricole regional banks.</p>
Role:	<p>Technological watch and software developer.</p>
Achievements:	<ul style="list-style-type: none">- Technological watch on Internet techniques and standards (Push, Corba distributed architectures, DCOM), HTTP servers comparison, telephony/internet integration solutions studies.- Java development tools evaluation (NatStar, Visual Age for Java), HTML page generation tools evaluation (FrontPage, Irida), Irida platform validation for web application development.- Standard proposal for web application development.- Participation in all technical meetings, in specifications and graphic charter definition for online banking site.- Training design on Internet technologies for Atlantica staff.- Reference templates development on banking web services with Irida, presentation layer and data access (DRI) development, HTML pages and JavaScript codes integration in Irida case tool (CASE) XGC.- Java applets development for loan simulation and customer account activity graphical representation with Visual Age for Java.- Atlantica staff training on Internet technologies.
Tools used:	<p>AIX Unix, C, HTML, JavaScript, Java, Tuxedo, Oracle V7, Irida (multimedia communication server).</p>