

FERNANDO CAPELETTO

LEAD SOFTWARE & ELECTRONICS SYSTEMS ENGINEER



i.am@fernando.engineer

European (Italian) Citizenship

U.S.A Green Card Holder

Former Mariner Officer from Navy Corps of Engineers.

15+ years in all System & Software Development Lifecycle.

Experience in multiple domains: Naval & Defense, Logistics, Terminal Automation, Trading & Finance.

7+ years leading teams by example, mentoring colleagues, influencing stakeholders and paving the way in different hierarchical structures (from the most rigid to the flattest).

Tirelessly seek innovative approaches, continuous optimization of products and processes.

Loyal to the team, empathy for people. Leader-Servant.

SOFTWARE LABORATORY & NETWORK PRESENCE:

Website: <https://fernando.engineer/>

Cover Letter: <https://cv.fernando.engineer/coverletter.html>

Courses: <https://extension.fernando.engineer/>

Docker: <https://hub.docker.com/u/fjcapeletto>

Nexus: <https://nexus.fernando.engineer/>

GitHub: <https://github.com/fjcapeletto/>

GitLab: <https://gitlab.com/fjcapeletto>

Jenkins: <https://jenkins.fernando.engineer/>

JupyterLab: <https://jupyter.fernando.engineer/>

NPM: <https://www.npmjs.com/~fjcapeletto>

Redmine: <https://redmine.fernando.engineer/projects>

SonarQube: <https://sonarqube.fernando.engineer/>

SUMMARY

- 30+ years coding; 15+ years in Java, 7+ in C++, Python and Front-End technologies.
- 10+ years as Officer from Navy Corps of Engineers; 7+ years (3 in France) as Submarines Development Engineer.
- English, French and Portuguese professional proficiency.
- Engineer at the Brazilian Ministry of Science, Tech & Innovation.
- Experience in Trading System (High Volume & Low Latency) and Banking & Finance Applications.
- Outstanding references from Navy, Ministry and private sector.
- Experience using Waterfall, V-Cycle or Agile methodologies as Scrum, Kanban, SAFe, Extreme Programming.
- Containers, Microservices, REST, Event-Drive architectures; DevOps Experience managing QA/CI/CD pipelines.
- Full Stack Experience developing applications using Java 17/11/8, Spring, Spring MVC, Spring Boot, Spring Cloud, Spring MVC, Spring WebFlux Hibernate, Maven, Gradle, Flask, Django, Angular 8+, Node.js, JavaScript, TypeScript, CSS, HTML.
- Experience with Relational and Non-Relational Databases.
- Analytical, mathematical, problem solving and project management experience.

EDUCATION

- 01.2010 - University of Sao Paulo - Polytechnic School (SP, Brazil) - *Bachelor of Engineering: Electronics Systems*
- 10.2023 - IsraelIX - edX - *Professional Certificate*: Model-Based Systems Engineering - MBSE
- 12.2022 - IBM - edX - *Professional Certificate*: DevOps, Cloud and Agile Foundation
- 03.2015 - Naval Group (Toulon, France) - *Specialization*: Scorpène-class Submarines Combat System Software
- 12.2010 - Admiral Wandenkolk Training Center (RJ, Brazil) - *Bachelor: Naval Academy for Brazilian Navy Officers*
- Continuous Education - Multiple Platforms - *Certificate*: Full list available at <https://extension.fernando.engineer/>.

WORK HISTORY

[2024.02 - Present] - Depository Trust & Clearing Corporation - Lead Software Engineer - Tampa, FL - U.S.A.

- Modernizing the DTCC post-trade market infrastructure solutions that Automates, centralizes, and standardizes the processing of financial transactions;
- Using state-of-the-art software architecture & frameworks through Agile & DevOps methodologies for Continuous Integration / Continuous Delivery;
- Simplifying the complexities of clearing, settlement, asset servicing, transaction processing, trade reporting and data services;
- Mitigating risk, increasing transparency and security, enhancing performance, resilience, soundness and driving efficiency for thousands of broker/dealers, custodian banks, asset managers, financial markets and global financial services industry.

- Environment: Artifactory, AWS (Aurora PostgreSQL, API Gateway, CLI, CloudFormation, CloudWatch, DynamoDB, Elastic Load Balancing, EC2, ECS, IAM, Kinesis, Route 53, S3, Step Functions), BitBucket, CloudBees Jenkins, Docker, Eclipse/IntelliJ, Fortify, Git, GitHub & GitLab, Java, JIRA, JSON, Kafka, Kubernetes, Linux, Maven, Microservices, Nexus Repo, Oracle, REST API, SonarQube, Spring Framework, Splunk, Spring-Boot, TomCat.

[2023.07 - 2024.02] - Citibank N.A. - Senior Software Engineer - Assistant Vice President - Tampa, FL - U.S.A.

- Applications Development Senior Programmer Analyst in the Trade Channel Technology, a division of Citi's Institutional Clients Group
- Deliver customized engineering solutions using cutting-edge software architecture concepts as distributed applications based on containerized and scalable Microservices, with excellence in Full-stack development, working in the complete Software Development Life-Cycle, using Agile and DevOps methodologies for Continuous Integration / Continuous Delivery.
- Project: [Citi Supplier Finance \(CSF\)](#) - Web based Traded Solution optimizing Cash Conversion Cycle for Buyers and Suppliers supporting financing for uninterrupted supply flow for Buyers while also supporting the working capital needs of its key suppliers.
- Environment: Artifactory, BitBucket, Confluence, Eclipse/IntelliJ, Git, GitHub & GitLab, Gradle, J2EE, Java 8, Jenkins, JIRA, JSON, Kafka, Linux, Maven, Microservices, Oracle, REST API, SonarQube, Spring Framework, Spring-Boot, WebSphere.

[2023.01 - 2023.07] - Fernando.Engineer LLC - Principal Engineer (Owner) - Dallas, TX - U.S.A

- Developing and Manage projects from conception to completion, using avant-garde software architecture concepts as distributed applications based on containerized and scalable reactive Microservices, with excellence in Full-stack development, using Agile and DevOps methodologies, ensuring on-time delivery within budget through effective collaboration with clients and stakeholders.
- Prevent and reduce technical debt through good development practices, refactoring regularly, using code quality metrics, static code analysis, and tracking tools to monitor and manage it over time.

Environment: Android Studio, Angular v14, API Gateway, AWS Lambda, C++, Docker, Docker-Compose, Eclipse/IntelliJ, Git, GitHub & GitLab, Gradle, Ionic & Capacitor, Java, Jenkins, JIRA, JSON, Kafka, Linux, Microservices, MongoDB, MySQL, NetBeans, NodeJS, PostgreSQL, RabbitMQ, Redmine, REST API, Serverless, SonarQube, Spring Framework (Spring Core, Spring Boot, Spring Data, Spring MVC, Spring Security, Spring WebFlux), TypeScript, Visual Studio Code, WebFlux.

[2022.06 - 2022.11] - Tick Trading Software - Senior Software Engineer - Dusseldorf, Germany

[tick Trading Software AG](#) is a Leading Application Service Provider in the field of stock market access through the TradeBase Multi Exchange Platform (TBMX), a trading platform with thousands of installations, over dozen customers, providing direct connections to German and international marketplaces and brokers having several million transactions per day.

Responsibilities:

- Software development using Agile methodology and Test-Driven Development for the trading platform **TradeBase MX**.
- Design, development, changes & extensions for TradeBase MX components including: new features, bug analysis and fixing; Code reviewing and testing; synchronization with third-party systems and software documentation;
- Participation in Scrum events to improve the efficiency of the development process

Environment: Agile Methodology, Android Studio, Angular v12, Artifactory, Confluence, Docker, Eclipse/IntelliJ, ESLint, Git & GitLab, Gradle, Ionic & Capacitor, Java, Jenkins, JIRA, JSON, IntelliJ, Linux, Microservices, MySQL, Node.js, Prettier, PWA, Redmine, REST-API, SonarQube, TypeScript, Vert.x, Visual Studio Code, WebFlux, Inhouse low latency messaging.

[2020.11 - 2022.05] - TBA Group/Konecranes - Senior Software Engineer - Dusseldorf, Germany (Dutch company)
TEAMS (Terminal Equipment Automation Management System) is the TBA's Equipment Control System (ECS) fleet management for automated equipment and autonomous vehicles for container handling at terminal ports.

Responsibilities:

- Software development using Agile Scrum (SAFe) methodology and CI/CD DevOps processes for the development of distributed, scalable, and highly available applications for TEAMS, including:
- Design and development of new TEAMS modules, changes & extensions for existing ones.
- Bug analysis and fixing; Code reviewing and testing; and Software Documentation.
- Unitary and Integration Tests development (JUnit, Boost-Test, and script-based tests)
- Java API development using Java Native Interface integrating TBA's C++ libs within Java components.
- Developed applications using J2EE, Spring MVC, Spring Boot, JPA, Angular 8, Hibernate, Maven, Java Servlets, Java Server Pages (JSP), JDBC, JavaScript
- Presentations of functionalities to stakeholders.
- Hotline service (24h stand-by for customers)
- Participation in Scrum & SAFe events to improve the efficiency of the development process.
- Mentored TBA Intern Master's Students in software development for supervised and unsupervised learning using machine learning concepts and Python libraries.

Environment: ActiveMQ, Agile Methodology, AutoCAD, Avro, Boost, C++, Confluence, Corba, Eclipse/IntelliJ, Git & GitLab, Grafana, Hibernate, Java, Jenkins, JIRA, JSON, Jupyter, Notebook, Kafka, Linux, Liquibase, Maven, Microservices, Netbeans, Nexus, Oracle, Python, QGIS, REST API, SonarQube, Spring Boot, SQL Server

Letter of Reference: https://credentials.fernando.engineer/20220531_TBA_LetterOfReference.pdf

[2010.03 - 2020.08] - Brazilian Navy (Brazil and France) - Electronics Systems and Software Engineer (Ex-Marine)

- **Lieutenant of Brazilian Armed Forces** with 10+ years of experience in Systems and Software engineering for Naval and Defense domains working on its specification, architecture design, development, tests, predictive, corrective and evolutive maintenance, IVVQ (Inspection Verification Validation and Qualification) industrial cycle as well its Integrated Logistic Support and Project Management activities.
- 7+ on the Brazilian Navy Submarines Development Program (including 3 years in France missions)
- Experience in complex and critical real-time military systems with high availability and fault tolerance requirements (e.g Combat Management Systems; Communication Systems, Sonar System, Navigation, Environment System, Performance Monitoring and Fault Location Systems, Weapons Systems, Periscopes, Radar System, Electronic Warfare Support Measures (ESM) and Countermeasures (ECM)).
- Providing technical subsidies for management decision-making and strategic planning.
- Chosen by the Naval Force and the Ministry of Defense for 19 engineering missions, 15 of which were international.
- These 10+ years of experience in various military organizations and programs are subdivided into the experiences below.
- Developed applications using Java 8, J2EE, Spring MVC, Spring Boot, JPA, Angular 8, Hibernate, Maven, JSP, TypeScript, HTML5, CSS3, Python, C++.

[2019.10 - 2020.07] - Ministry Of Science, Technology and Innovations - Electronics Systems and Software Engineer
Brasilia, Brazil

Brazilian Navy engineer representative under General-Coordination of Sensitive Goods with responsibility to promote the non-proliferation of nuclear weapons through the implementation of Nuclear Suppliers Group (NSG) Guidelines for the trade of nuclear and nuclear-related goods

Responsibilities:

- Support to the Brazilian Navy's strategic nuclear projects pertaining to the procurement and acquisition of vulnerable assets deemed crucial to keep the continuity of the **Brazilian Nuclear Submarine Development Program** afloat.
- Technical Analysis of equipment, materials, software, and technologies.
- Coordinated and arranged the Brazilian Nuclear Supplier Group's technical specialized activities to discuss the technical proposals Nuclear Suppliers Group's control list modifications.

- Engendering subsidies and technical assistance to the Foreign Affairs Ministry on issues pertaining to international cooperation treaties.

Commendation terms to the Brazilian Navy General Commander:

https://credentials.fernando.engineer/20200819_MCTI_Letter_25490_CommendationForm_LetterAndAppendix.pdf

[2015.05 - 2019.09] - Brazilian Navy - Electronics Systems and Software Engineer - Rio De Janeiro / Toulon, Brazil / France

Serving on Submarines Development Program General-Coordination Headquarters.

Responsibilities:

- Supervise at the shipyard the processes of Development, Construction, Assembly, Inspections, Quality Assurance, Commissioning, Tests & Trials for the Submarine Class Scorpene in the Brazilian Navy Submarines Development Program scope.
- Analysis, Preparation, Execution, and Reports of the Assembly, Installation, Set-to-Work, Tests and Trials Specifications and Protocols (at Factory, Harbor, and Sea), for Equipment, Software, Systems, and Systems of Systems of the SBRs.
- Creator, Architect, Full Stack DevOps, and System Administrator of **SISCAPELA**: a Business Intelligence System to Audit and Control the SBR Submarines' industrial life cycles for its component items and functional circuits. (outcome details in my Cover Letter and in the Letter of Thanks below)
- **Full-Stack DevOps** of a Tactical Situations Display for Vessels Software for evolutionary maintenance for the Brazilian Submarine Combat System (AIS-MK0)
- Hardware & Software Technical, Interface and Requirements Specifications.
- Detailed Design Review for Architecture, Integration, Functionalities & Performance.

Environment: Angular 8, CSS, Eclipse, GALAXI (Java Framework), Git, Hibernate, HTML5, JavaScript, Java, Linux, Maven, Node.js, PHP, PostgreSQL, PLSQL, Python, Spring Framework, Spring Boot, TypeScript, VBA, XML

Letter of Thanks:

https://credentials.fernando.engineer/20190930_OS-74-76-2019-COGESN_Dismissal_of_Function_and_Thanks_-_LT_Capeletto.pdf

[2012.08 - 2015.03] - Brazilian Navy - Electronics Systems and Software Engineer - Toulon, France

Serving at the Technical Office of the Brazilian Submarines Development Program in France.

Responsibilities:

- Engineer of the Brazilian Navy in charge of receiving Transfer of Knowledge and Transfer of Technology for the Combat System for Scorpene-class Submarines [SUBTICS](#)
- Management for Systems of Systems with millions of code lines, distributed architecture, and heavy constraints on performances and reliability, based on [GALAXI JAVA EE Framework](#)
- **System and Software Engineering:** Design, Development and Documentation using V-Model SDLC in compliance with military standards:
 - Requirements Specification, Tests Procedures, Test Campaign Design and Running Reports at Unit, Integration, System and Acceptance levels);
 - Architecture Design (Software Components, Modeling and Interfaces);
 - Development and Frameworks Analysis, Detecting, Reproducing, Debugging and Solving of functional problems related to the system architecture.
- **System & Software Architect, Full Stack DevOps, Integrator,** and IVVQ Tester of Mines and Obstacles Avoidance Sonar System (MOAS) for evolutionary maintenance for the SBR

Environment: CORBA, ClearCase, DDS-DLRL pattern, Dynamic Object-Oriented Requirements, System (IBM DOORS), Eclipse IDE, Git, HP Quality Center, Linux, Java (J2EE and Frameworks e.g., Galaxy, Java RMI, JUnit, Spring, etc), Rational Software Modeler (RSM), Shell Script, VmWare, XML, Wireshark.

Letter of Thanks:

https://credentials.fernando.engineer/20150312_OS-75-17-2015-ETPROSUB_Thanks_-_LT_Capeletto.pdf

[2011.01 - 2012.07] - Brazilian Navy - Electronics Systems Engineer - Rio De Janeiro, Brazil
Serving at the Navy Weapon Systems Directorship, Engineering Department of Superintendence of Systems.

Modernization for the Class Tupi Submarines' Combat System:

- Replacement of the Ferranti KAFS A10 Shooting and Tactical Data Detection System and the CSU83 Sonar by Lockheed Martin 'AN/BYG 501 MOD 1D' Combat System.
- Running the Sea Acceptance Trials for the new Combat System installed in Submarine Tapajó (S-33) (10 days on the sea / 86 hours of immersion)

Sea Acceptance Trials for Patrol Vessels: Sea Acceptance Test of Cannon 40mm, Navigation Console and Equipments of Patrol Vessels Macaé (P-70) and Macau (P-71)

Responsibilities:

- Writing and Analysis of Technical Notes, Reports, and Specification Documents for the acquisition, modernization, replacement, and installation of Electronic and Weapon Systems equipment for Military Organizations and naval assets of the Brazilian Navy;
- Writing, Running, Analysis, and Reports about the User and Technical Manuals, Specifications, Set-to-Work, Harbor and Sea Acceptance Trials of equipment and systems.
- Integrated Logistic Support: Analysis regarding the built-in configuration, allocation, maintenance sheets, and replacement interchangeability feasibility of parts, their component items, and suppliers.

SKILLS

Java & Java built tools and Frameworks (e.g, ANT, Gradle, Hibernate, Liquibase, Maven, Spring Core, Spring Boot, Spring Data, Spring MVC, Spring Security, Spring WebFlux, J2EE, JDBC, JPA, JSP, Servlets, Junit, Mockito, PowerMock), C++ (including BOOST libraries and STL), Message Brokers (ActiveMQ, Kafka, RabbitMQ), Angular v14, Agile, Scrum, Api Gateway, AVRO, AWS Lambda, Collaborative Work, Combat Systems, CSS, Defense Domains, Distributed Systems, Data Science, Docker & Docker Container, Eclipse, Electronics, Full Stack, GALAXI, GEMO, Groupwares, HTML5, JupyterLab, JIRA & Confluence, HP Quality Center, HTML, IBM DOORS and RSA/RSM, Integration, IntelliJ, IVVQ, Jenkins, LabView, Leadership, Linux, MATLAB/Simulink, Microservices, MIL-STD-498, Model-Based System Engineering, MongoDB, MySQL, MVC Pattern, Navigation Systems, Nexus, Netbeans, Node.js, OOP, Oracle, Perl, PHP, PL/SQL, PostgreSQL, Python (Flask, IPython, matplotlib, Numpy, Pandas, Scikit-learn, Seaborn, etc), Reactive Programming, Redmine, Requirements Management, REST, Serverless, Shell Scripting, Software Engineering lifecycle, Shell, SOAP, SonarQube, Systems Engineering lifecycle, Tomcat, Web Development, WebFlux, WebSphere, UML, V-Model, Versioning (i.e ClearCase, Git, SVN), Visual Studio Code, XML;