

# Felipe C.

## C++ Engineer

Felipe is a versatile game developer and software engineer with over 18 years of experience, specializing in C++, OpenGL, Unity and Unreal Engine for game development and AR, VR solutions. He is deeply engaged in creating immersive experiences, having developed a proprietary 3D engine and contributed to both commercial and indie projects across gaming, medical, and financial industries. With a Master's Degree in Electrical Engineering and a Bachelor's Degree in Computer Science, Felipe has led full-stack development for web platforms, managed big data solutions, and engineered back-end systems for real estate, healthcare, and trading applications. His entrepreneurial background as a partner and owner of software companies has equipped him to tackle diverse technical and business challenges, from algorithm design to client support. Currently, he is developing an indie tactics RPG inspired by Final Fantasy Tactics using Unreal Engine, while continuously expanding his expertise in cutting-edge technologies and cross-disciplinary collaboration. Felipe has a passion for programming, as he believes it embodies the essence of being a true and real hacker. Working close to machine-level experience languages gives him a deep sense of connection with the hardware through the software and the control over the machine is something wonderfully spectacular and endlessly fascinating.

## Work Experience

### > Ambush

2024 – present

#### C++ | Java Backend Engineer

- Worked for the client of a big well known Financial company (NDA).
- Developing backend systems for subscription-based billing platforms using C++ and Java, with Spring Boot for service architecture for high demand systems.
- Designed and optimized data flows between services, ensuring secure, real-time processing of financial transactions.
- Integrated with multiple third-party APIs to enable seamless, accurate billing and automated subscription handling.
- Focused on troubleshooting and resolving billing issues, enhancing system stability and reducing downtime.
- Collaborated with cross-functional teams to streamline user experience and improve subscription lifecycle management.

Technologies used: ● C++ ● Java ● Jenkins ● Springboot

> Sansar.com

2021 – 2023

### **C++ UI Engine Engineer**

- Proprietary Engine Development: Built and maintained core engine systems in C++, covering areas such as model loading, UI management, and platform toolset configurations.
- UI Systems: Created and implemented UI interfaces using NoesisGUI, including custom feature development, performance optimizations, and extended functionality.
- Character UI Design: Created UI interfaces for character selection and customization, ensuring intuitive user interaction and efficient asset integration.
- Cross-Platform Tooling: Configured and optimized platform-specific toolsets to ensure smooth builds and deployment across multiple targets.

Technologies used: ●C++ Custom Engine ●Noesis Gui

> Pixida.com

2021 – 2023

### **AR Unity | C++ | Java Engineer**

- Worked for the client BMW Group.
- Creating the Unity side of the project or AR, VR solution, being responsible for the entire Unity and front-end development process.
- Developing back-end components to handle incoming data from internet and hardware devices.
- Integrating various technologies such as C++ in order to make Unity XR plugin in order to make camera and other sensors utilities
- Java mobile and network (custom UDP/TCP protocol) applications.
- Developed back-end solutions to support UI for Android applications, ensuring efficient data flow and seamless integration with front-end components.
- Built and maintained a management system in Java for operational control, reporting, and resource monitoring.
- Designed and implemented use cases of 3D environmental setups in maps, focusing on vehicle navigation, route visualization, and real-time location data integration.

Technologies used: ●Unity ●C++ ●Java ●AR

> EnverStudio.com

2023 – 2024

### **(Freelance) Unity VR Engineer**

- Collaborated on the development of DeadOfTheSea.com, a VR pirate adventure game for Oculus Quest 2.
- Focused on gameplay programming using Unity and C#, implementing core mechanics such as player interactions, ship controls, and combat systems.

- Integrated VR-specific input handling and optimized immersive experiences for standalone devices.
- Integrating various technologies such as C++ in order to make Unity XR plugin in order to make camera and other sensors utilities
- Worked closely with artists and designers to bring intuitive and engaging gameplay to life.
- Contributed to testing, debugging, and polishing gameplay features for a smooth VR experience.

Technologies used: ● Unity ● Oculus Quest 2 ● VR Gameplay developer

## > HydraSystems

2020 – 2021

### (Freelance) Front-End Engineer

- Developed approximately 6 complete games, primarily slot machine games, distributed in the United States, during the period from September 2020 to May 2021.
- Worked on bug solving and contributed to the creation of about 30 games on an existing Unity platform.
- Participated in the development of a AAA new slot machine game targeted for the US market.
- Worked on integration systems between server and client.

Technologies used: ● Unity

## > ClubeFII.com.br

2015 – 2020

### Partner, Full-Stack Engineer

- Developed the ClubeFII website administrative tool using VBNet and SQLServer for handling big data of real estate funds and moderating client and user actions within the system.
- Built and maintained the ClubeFII.com website, implementing dynamic CSS, JavaScript, HTML content, and ASPX programming.
- Contributed to algorithm development using ASPX, JavaScript, HTML, CSS, VB.Net, SQL Server, and Highcharts.
- Managed the server side of ClubeFII.com, including VB.Net, SQL Server and Azure management, email alerts, account payments, and other administrative functions.

Technologies used: ● ASPX ● ASP.NET ● VB.NET ● .NET Core ● HTML ● CSS ● JavaScript ● Highcharts ● Azure ● SQL Server

## > Megajogos.com.br

2007 – 2020

### Unity & OpenGL Engineer

- Developed a proprietary 3D physics engine over one year, showcased at <https://www.youtube.com/watch?v=R9Qf2uZG8x4>.
- Created an online 2D and 3D billiards game over one year, available at <https://www.megajogos.com.br/sinuca-3d-online>.
- Built an iPhone games framework in three months, focusing on algorithm development using Objective-C, cocos2d, and OpenGL ES.

- Developed Webtorneios – Dominoes and Truco mobile games over six months, including mobile/Unity platform, client/server architecture with Java and C#.
- Provided support for artificial intelligence and other features for many games within the Megajogos mobile platform, developed in AS3 and Java, available at <https://play.google.com/store/apps/details?id=air.br.com.megajogos.mobile>.
- Developed a generic payment system supporting multiple platforms and products, including internationalization.

Technologies used: ● C# ● Unity ● ECMAScript ● Java ● Objective-C ● OpenGL ● Artificial intelligence

## > Infomed Systems

2012 – 2019

### **Partner, Full-Stack Engineer**

- Developed desktop medical software for infection control disease, sold in more than 100 hospitals in Brazil.
- Delphi application among other integration technologies such as C legacy palmtop applications.
- Database administration, migration and integration of diverse types of databases from clients
- Visited hospitals to provide support to clients.

Technologies used: ● Delphi ● C ● Firebase ● Database Administration

## > FourLab Forex/Stock Market

2011 – 2017

### **Partner, Full-Stack Engineer**

- Developed a Forex/Stockmarket framework over six years using MetaTrader 4 and 5, JNI, and Java.
- Had experience with artificial intelligence in trade marketing, including neural networks, classification, clustering, regression algorithms, and statistical modeling of financial time series.
- Metatrader/Java integration for real time java backend server for decision taking

Technologies used: ● Java ● Meta trader ● Artificial intelligence ● Neural networks

## > DBJUS.com

2016 – 2016

### **(Freelance) Java backend Engineer**

- Developed algorithms over three months to support Brazil's largest site for online electronic legal processes (<http://www.dbjus.com>).
- Worked with Java, Rest, Cassandra, GWT, Solr, Elastic Search, Hibernate, MySQL, PostgreSQL, and Linux server deployment.

Technologies used: ● Java ● Hibernate ● GWT ● REST ● Cassandra ● MySQL ● PostgreSQL ● Elasticsearch ● Solr ● Linux

> IEB.UFSC.BR

2005 – 2007

### R&D academic development

- Developed a virtual reality system for electrocardiogram and virtual reality systems for physiology experiments.
- Worked with VRML, ActionScript, JSP, 3ds Max modeling and animation.
- Contributed to scientific article writing.
- Scientific award for better application in congress.

Technologies used: ● JSP ● ActionScript

## Projects

> Independent Experience

2023 – Present

### Game Tactics Studio

- Developing an online turn-based games framework, a simple RPG card game, and a tactics game currently under development.
- Being responsible for algorithm server development using Java NIO, Netty, and Berkeley DB.
- Algorithm client development using AS3, C#, and Unity.
- Unreal development of client based game based on final fantasy tactics 2D/3D like game

Technologies used: ● C# ● Unreal ● .NET Core

> Independent Experience

2025 – Present

### Image Pro

- **ImagePro** (<https://github.com/felchs/imagepro.git>) is a lightweight, open-source image processing software written in C++.
- It provides a user-friendly interface using **Dear ImGui** and **GLFW** for real-time editing.
- The tool supports loading, displaying, and manipulating images with GPU acceleration via OpenGL.
- Brightness/contrast adjustment, filtering, and region selection.
- Ideal for educational use or as a foundation for custom image analysis applications.

Technologies used: ● C++ ● OpenGL

## Education

Master's Degree in Electrical Engineering

Federal University of Santa Catarina: PGEEL/IEB

Bachelor's Degree in Computer Science

UniFacvest

# Skills

- C#
- ASPX
- ASP.NET
- VB.NET
- Unity
- HTML
- CSS
- JavaScript
- ECMAScript
- Highcharts
- Java
- JSP
- Hibernate
- Objective-C

- C++
- C#
- ASPX
- ASP.NET
- VB.NET
- Unity
- Unreal Engine
- DOTween
- OpenGL
- OpenCV
- Delphi
- GWT
- REST
- WebRTC

- Azure
- Cassandra
- MySQL
- PostgreSQL
- SQL Server
- Elasticsearch
- Solr
- Mapbox
- Linux
- ActionScript
- Neural networks
- Artificial intelligence
- VR
- Big data