# Hugo Ferreira

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#### **INTRODUCTION:**

Hi! I'm a Portuguese developer currently looking for my next challenge. I've worked on projects of varied complexities, with various programming languages, from Web Development to Game Engine programming, from User Interface coding, to Embedded development to database optimization.

I've been in outsourcing projects where clients require rapid solutions to projects that are already having problems, I've dealt directly with clients and their requests for features or bug descriptions, and I've been responsible for a team of programmers using Agile/ Scrum. I've had the experiences of not only working alone, but also being in a large team, the responsibility of being self-managed and of managing others.

My knowledge has been acquired through a lot of hard work, and I'm always ready to share it, be it informally or by giving in-house training. I've been told I work well under pressure and people around me appreciate my soft skills. Whatever I don't know I make sure to be the one that learns it and allows that knowledge to advance the team. I'm curious, self-driven, and self-taught, and that requires patience and persistence.

My latest work was in Game Development, and I've taken this last year to learn about Google Cloud, Google App Engine and Compute Engine, Docker and Kubernetes. I used some Covid down time to learn subjects like neural net math, CUDA, OpenCL, and C++ instruction set optimization. My objective is simply to join a team where my past knowledge can be of value, and where I'll be able to keep growing and find new knowledge.

Thank you for considering me for a position and please do visit <u>my site</u> for more information about my career and projects.

#### **WORK EXPERIENCE:**

Hiatus/Freelance Developer Project: NOW IAN 2022

A mix of small Freelance projects and personal time taken.

- nodeJS
- JavaScript
- PHP
- Bootstrap
- CronJob

FRVR Senior Developer Project: DEC 2021
FRVR Worlds JUL 2021

Joined <u>FRVR</u> working on their game <u>FRVR Worlds</u> as a Senior Developer, mostly on:

- Analytics
  - o Removal of Analytics connections to Facebook and Google
  - o Implementation of in-house specific Analytics code.
- Localization
  - Creation of a Localization pipeline allowing the game to initially be translated into Russian using the Google Infrastructure and working with an outsourced translation company.
- Gameplay
  - o Improvement of First Time User Experience and Tutorial sequence.
  - o Various gameplay alterations and implementation.

- Visual Studio
- GIT
- nodelS
- Javascript
- webGL
- webSockets
- Google Cloud

Learning/ Research Developer Project: NOW FOUNDRY SEP 2020

Development of a personal learning project "FOUNDRY", a Distributed Processing Platform that requires multiple technologies, specifically:

- Classic/ Convolution Neural Networks
- nVidia's CUDA language
- OpenCL language
- nodeJS work bots
- nodeJS websockets protocols
- Detail Video

- CUDA
- OpenCL
- Neural Networks
- C++
- Visual Studio
- win32 API
- GIT
- PHP
- nodeJS
- Javascript

#### CALCISCON / BHOUT

**DEC 2019** 

**NOV 2019** 

**JUN 2019** 

Continued work on multiple projects as a FullStack Developer, two examples:

- CALCISCON
  - o Development of a multi-language, mobile-friendly website for a pharmaceutical startup with backoffice to manage news content.
- BHOUT BOXING
  - Development of a Website and Backoffice for the management of a new Gym concept.

- PHP
- APACHE
- BootStrap
- memCache
- mySQL
- BackOffice
- Server Config

# Project: MINICLIP Senior Software Developer 8 Ball Pool Facebook

Assigned to the Facebook Games version of Miniclip's 8 Ball Pool. We used Vue and Typescript and the core of the 8BP game to render and simulate the table physics, and expanded that into new game modes.

- Generic UI improvements.
- Dismissible notification dropdown.
- Improvements on multi-language text rendering (Cyrilic, Japanese, Korean, etc).
- New Lucky Shot game mode, import challenges from iOS 8BP and make them inter-compatible.
- Particle Editor/ Importer for in-game visual effects.

- VUE
- TrueScript
- JavaScript
- Facebook API
- Jenkins
- SCons
- Jira
- Stash
- Confluence

# MINICLIP TechLead/ Project: Senior Software Developer PACMAN.IO

In a partnership between MINICLIP and NAMCO, I was given the TechLead of a team tasked with the development of an IO-based game using the Pacman intellectual property.

- Refactored the AGAR.io engine to improve memory usage and frame rates.
- Added Box2D support for physics interactions.
- Added A\* Pathfinding for the Ghost Bots.
- Importing and preprocessing of maps designed in
  - o TILED
- "Squishy physics" of the pacman body.

APR 2018

**MAY 2019** 

- C++
- BOX2D
- EMSCRIPTEN
- TILED
- Javascript
- Jira
- Stash
- Confluence

- Design of a system to enable the change and tracking of game parameters by the producer.
- "Clothing/Addons" system that allowed the pacman to have crowns, glasses, etc.
- Design of the site frontend.
- Responsible for the successful onboarding of a new developer to the team and the company.
- Game Video

### MINICLIP Senior Software Developer Project: 8 Ball Pool

**DEC 2018** 

During a pause in the pacman project had a short stay with the 8 Ball Pool team helping close features for the Christmas release.

- Objective-C
- XCode
- GIT

## MINICLIP Senior Software Developer Project: Q&A Script

**NOV 2018** 

During a pause in the pacman project was assigned to the development of engine-interface calls in LUA, to allow the automation of Q&A scripts in various games, to improve detection of errors in ongoing feature development.

- LUA
- Objective-C
- GIT
- QA Testing
- Automation

### MINICLIP Senior Software Developer Project: DIEP.IO

MAR 2017 MAY 2016

After purchase of the DIEP.IO game IP, I was assigned to a team to clean and improve its codebase and translate the game from a browser IO to the iOS platform.

- Multiple User Interface Improvements and changes
- Game Logic and resource allocation optimizations
- Ownership of the client net code, using google protobuffers
- Game Video

- Objective-C
- XCode
- GIT
- SourceTree
- Atlassian ecosystem
- Google ProtoBuffers

### MINICLIP Senior Software Developer Project: AGAR.IO

APR 2017 to MAR 2018 OCT 2015 to APR 2016

Started at Miniclip on the AGAR.IO game team, an already established game with millions of concurrent players, for mobile platforms, and came back to this project after we finished primary development on the diep.io

- Objective-C
- XCODE
- GIT
- SourceTreeAtlassian ecosystem

project. • SCRUM

- General UI Improvements and Implementations
- DNA Featureset
- Mystery Potions Featureset
- Experimental Skins
- Game Video

### W4TW Fullstack Senior Developer/

Invited to found a WebSolutions Company as CTO, I was in charge of everything on the technical side. As a two-person startup, our goal was to provide competitive pricing for top-of-the-line development projects, as simple as a landing page, to complex backoffice-only structures that are not visible to the public:

- User Interface and User Experience: I was personally responsible for the development of Javascript code to improve or overcome common User Experience challenges for our clients, for example:
  - o Ability to transition to another language, without a page refresh
  - o Transitional/ Animation effects: Sliders, Overlay Captions, LightBoxes, CrossFading
  - o Multi-Language Form Validation
  - o Client-side Templating and Local Storage
  - o RealTime Events under Ajax/webSockets
  - o Responsive Behaviour
  - HTML5-related: Drag & Drop Uploading, audio and video players
- I was personally responsible for the development of a PHP MVC
   Framework structured on top of Apache Mod-RW, that allows:
  - Platform Detection (Ability to serve a site package to a standard desktop browser, a different site package for tablets, and another site package for Mobile platforms)
  - o Language Detection (Ability to serve the same site in multiple languages and auto-detect user preferences)
  - o Fast Serve, using templating technologies and server caching strategies (memcache where available)
  - BootStrap-based for easy creation of BackOffice environments

SEP 2015 JUN 2014

- UBUNTU Servers
- APACHE
- SSH
- MySQL
- PostgreSQL
- PHP
- Javascript
- JQuery
- Smarty
- Moustache
- nodeJS
- GIT
- OAuth
- REST
- MemCache
- etc...

#### BOLD **Fullstack Developer**

#### Outsourced to: **LEYA**

**UBUNTU Servers** 

**MAY 2014** 

**JAN 2014** 

Outsourced to LEYA, a large Publishing Company, undergoing performance issues with its e-learning solutions.

- Cronjobs
- mySQL
- PHP
- SQL optimization
- memCache
- **REST**
- Javascript
- Placed on an e-Learning project that was suffering from lagging database queries. Many critical sub-systems had been implemented by Junior Programmers and were failing under heavier loads. My responsibilities were the redesign of specific queries and tables, re-indexation, code refactoring.
- The design of a script for overnight data migration between Portugal and Brazil, that served the dual purposes of data backup and also updated the Brazilian version of the platform with fresh
- There was a high failure rate in the REST API they had, especially after I designed a script for overnight data migration, that placed the API under heavy load it hadn't yet experienced, and I oversaw the redesign of that REST API calls into a sturdier framework.

#### **BOLD Fullstack Developer**

### Outsourced to: **Content Ignition**

Outsourced to Content Ignition (CIG), their business core is the selling of captured emails to advertisement partners. As a Startup, they were suffering from classic fast-growth pains, where they had a lot of requests from clients, but were lagging behind in supplying them with fresh emails. Emails were captured from a collection of landing pages that weren't normalized, each different in substructure. My first focus was to stabilize those landing pages, make sure they didn't crash, so that email capturing would not stop, and then optimize the CronJobs that piped fresh captured emails to prospective clients in call centers.

- As a Startup there was a lot of room to innovate and implement fresh code, CIG suffered from a fragmented code base of 30+ landing pages, where each one now had its own problems. First goal was to make sure those landing pages could be refactored so that changes could then be made from a central BackOffice.
- Cron Jobs where the heart of the monetization of the company, as they sent out emails in blocks of hundreds to paying customers, and where deemed critical, and could therefore not fail. To that effect I designed a class system, giving CronJobs better error recovery, self caching, so that the CPU loads on the server could be reduced, and more data could be pushed out, and therefore sold to clients.

### **SEP 2013**

- **UBUNTU Servers**
- APACHE
- Cronjobs
- MySQL
- PHP
- MemCache
- Javascript

**DEC 2013** 

Created specific code to manage A-B Testing in landing pages.

### BOLD Fullstack Developer Outsourced to: MONDAY

Outsourced to MONDAY originally to assist in the optimization of their Servers (mainly Database Query bottleneck analysis and correction), but focus then shifted, and was made responsible for MONDAY's September "Back to School" PromoFans campaign. To that effect working with CakePHP and designing the table structures to accommodate the format of these promotions.

- Had some experience in resolving database query bottlenecks, but was able to take it further with long query dump inspection and structuring a possible refactor of the code to dump data on long queries, and where optimization was not possible, go with caching solutions.
- First time creating code for CakePHP MVC.

#### **AUG 2013**

- RED HAT Server
- APACHE
- MySQL
- PHP
- CakePHP MVC
- GIT

### WIDESCOPE Fullstack Developer Outsourced to:

Hired by Widescope for Outsourcing at Sapo, the Portuguese equivalent to Google. SAPO developed its own proprietary search engine, and the company now operates in multiple varied markets, such as advertising, video, emailing, online auctions, etc.

- I was involved in multiple projects across multiple internal departments, mostly directed to what could be called "classical" web-development, standards compliance, usage of templating, multi-language, caching, server configuration and hosting detailing.
- I did some visualization work for the in-house BigData department, using in-browser technologies like Google O3D (now defunct), webGL, Raphaël, HighCharts and Ajax and webSockets and webWorkers, to be able to have a visual and interactive representation of large datasets.
- Placed in the Mobile Department, where I had first hand experience with the challenges of mobile web development, responsive design, resource size preprocessing, page minification, platform detection, client-side caching, etc.

APR 2013 NOV 2010

- LINUX
- PHP
- Javascript
- JQuery
- Modernzr
- nodeJS
- WebSockets
- Ajax
- Mysql
- PostgreSQL
- REST
- SOAP
- memCache
- SVN
- GIT
- webGL
- Raphael
- HighCharts

### Fujitsu Systems Operator/ Developer

OCT 2010 APR 2009

Worked on a technically-oriented call center for Fujitsu, responsible for taking calls and determining point-of-failure of systems, and performing troubleshooting on the client side.

- Remote Desktop
- Security-oriented javascript on internet explorer

### SOFNI Portugal/ ON Portugal

### **Analyst Programmer**

SOFNI developed Point of Sale Solutions software for the Portuguese market using proprietary and generic hardware. The software allowed the seller to know the credit rating of a specific client, to sell products and print out invoices, to receive an order, and to send all that data back to the warehouse for preparation of the next-day shipping.

- I was responsible for maintaining and updating their C++ codebase, which ran under Windows Mobile. Tax variations, client requests, bugs, all required a constant stream of code updating.
- I had my own personal phone, and received direct client requests for new features, dealt with bug reporting, gave step by step explanations, and was entrusted to maintain good relationships with the clients.
- Due to the geographic situation of having a programmer in Porto (up north) and another in Lisbon, I installed a SubVersion Code Management Solution so that we could both operate on the same codebase, and set up a Wiki on our company's website, so that we could share technical information as development progressed.
- My main project was the development of a solution that allowed, through a mobile card, the synchronization of data between a seller's unit on the street, and the warehouse. That was achieved using embedded C++, TCP/IP Sockets, LUA, and it also communicated with a central site that served as a hub and had a REST API, storing details in a mySQL database.
- Working with such large sets of data that have to be visible to the seller, on such small screens gave me a very acute understanding of User Interface Design, the use of the Z-axis and planes to show and layer information, when screen real-estate is a very limited asset.

FEB 2009 DEC 2004

- Windows Mobile 32bit API
- C++
- SVN
- Visual Studio
- LUA
- TCP/IP Sockets
- Dreamweaver
- PHP
- REST
- MySQL
- WIKI

- OutLearning with an IBM team on-client, where I gained first-hand experience with the tool "Host Publisher". The project consisted of the real time conversion of AS-400 screens to HTML, while maintaining the corporate "Look & Feel". I was also tasked with developing Javascript code to enhance the interactivity with the user.
- Host Publisher
- AS-400
- Javascript

# INSA Portugal Software Developer Outsourced to: OCT 2002 WEB DEV AUG 2002

- Assigned to a Web development project, where I was tasked with the dynamic behaviour of the site.
- APACHE
- PHP 4.2
- MySQL
- Dreamweaver MX

### INSA Portugal Software Developer Outsourced to: PT/ ALTITUDE

 Assigned to Portugal Telecom, with a team from Altitude Software, where I developed Call Center Scripts, designed to satisfy various situations. Apart from programming, I was also tasked with code maintenance and documentation. ALTITUDE Scripts

**JUL 2002** 

**MAY 2002** 

- SVN
- Wiki

# INSA Portugal Software Developer Outsourced to: MAR 2002 INGA JUN 1999

- I was responsible for maintaining and updating an Oracle Database, mainly using Oracle Forms and Reports.
- Oracle Forms
- ORACLE Reports
- PL/SQL
- DOS Batch Scripting

# IBM Portugal Junior Developer Tranquilidade CBT DEC 1998

- Assigned to a project involving Computer Based Training, for the Portuguese company "Tranquilidade Seguros".
- To acquaint myself with the tools for this project, I did a crash course at IBM-Spain, in Madrid. This was my first work as a programmer, and I learned IBM's core values of professionalism, understanding the needs of the client, and making sure those are achieved inside budget and time constraints.

#### **COURSES/ SEMINARS:**

#### November 2015 - Miniclip

• Introduction to SCRUM Methodologies

#### February 2011 - Sapo

- Password Security concepts
- Symmetric and Asymmetric encryption and Hashing concepts
- Cross Domain Attacks & Code Injection
- OAuth & Dual Authentication

#### June 2008 - Aton Italy, Treviso (Italy)

- OnLog Platform
- OnRoad Platform

### September 2002 to October 2002 – INSA Spain

Websphere Studio Application Developer 2nd Module – "J2EE WSAD" (28 hours)

#### September 2002 – INSA Spain

- Websphere Studio Application Developer, 3rd Module "EJB and WSAD" (24 hours)
- Websphere Studio Application Developer, 1st Module "Entorno WSAD" (20 hours)

#### April 2002 - Altitude Software

• AS-00011 e AS-00021 "Partners Development"

#### May 2001 - Oracle Portugal

• "Reports Developer 6i: Development" (30 hours)

#### March 2001 - Oracle Portugal

- Second Module "Forms Developer 6i: Development" (30 hours)
- First Module "Forms Developer 6i: Development" (30 hours)

### May 1999 to June 1999 - Datacomp II TI

- "Application Development on Oracle 8 Platforms"
- Basic Concepts of Oracle PL/SQL;
- Developer/ 2000 and Designer/ 2000 (2.12) Forms 5 and Reports 3.

### December 1998 - IBM Spain, Madrid

• Course "Computer Based Training, CBTs"

#### September 1997 - ISN/ Fuzileiros Portugueses

• Completed a Life Guard Course

#### **ACADEMIC:**

12° Grade High School

### **LANGUAGES:**

English – Perfect understanding both spoken and written, from colloquial to technical.

French – Reasonable understanding while reading or hearing, average ability to reply.

Spanish – Reasonable understanding while reading or hearing, average ability to reply.