

# RÚBEN ANDRÉ LETRA BARREIRO

## Computer Science Engineer & IT/IS Programmer/Technician

✉ Academic E-mail @ FCT NOVA #1: [r.barreiro@campus.fct.unl.pt](mailto:r.barreiro@campus.fct.unl.pt)

✉ Academic E-mail @ FEUP #1: [up201808917@fe.up.pt](mailto:up201808917@fe.up.pt)

✉ Academic E-mail @ FEUP #2: [up201808917@g.uporto.pt](mailto:up201808917@g.uporto.pt)

@ Personal E-mail #1: [ruben.barreiro.92@gmail.com](mailto:ruben.barreiro.92@gmail.com)

@ Personal E-mail #2: [ruben.barreiro.92@outlook.com](mailto:ruben.barreiro.92@outlook.com)

@ Personal E-mail #3: [rubenbarreiro92@yahoo.com](mailto:rubenbarreiro92@yahoo.com)

☎ Mobile Number 1: +351 911 097 424

🎂 Birthday: November 19, 1992

🏠 Hometown: Avenidas Novas, Lisbon, PT (São Sebastião da Pedreira)

📍 Current Location: Almada, Setúbal, PT (Monte de Caparica)

🔗 GitHub's Portfolio/Personal Blog: <https://rubenandrebarreiro.github.io/>

🐙 GitHub: <https://github.com/rubenandrebarreiro/>

🔗 GitLab: <https://gitlab.com/rubenandrebarreiro/>

📦 Atlassian Bitbucket: <https://bitbucket.com/rubenandrebarreiro/>

🖥 Azure DevOps: <https://dev.azure.com/rubenandrebarreiro/>

📖 MathOverflow: <https://mathoverflow.net/users/134256/rúben-andré-barreiro/>

📖 StackOverflow: <https://stackoverflow.com/story/rubenandrebarreiro/>

🎓 Academia: <https://utaustinportugal.academia.edu/rubenandrebarreiro/>

🔗 Mendeley: <https://www.mendeley.com/profiles/ruben-andre-barreiro/>

🔗 ORCID: <https://orcid.org/0000-0003-2572-8949>

📖 Publons: <https://publons.com/researcher/1670842/ruben-andre-barreiro/>

🔗 ResearchGate: [https://www.researchgate.net/profile/Ruben\\_Barreiro/](https://www.researchgate.net/profile/Ruben_Barreiro/)

🔗 ResearcherID: <http://www.researcherid.com/rid/A-6299-2019>



## 👉 MOST PROUD OF

🏆 **Courage I had**  
I always work to take a sinking ship and try to make it float

💓 **Persistence & Loyalty**  
I always have shown my willingness and attitude, even in front of hard moments in life and work

📈 **Constant Improvement**  
I'm always obsessed in improve myself and get better than I was before

👤 **Inspiring men in tech**  
I'm a hard-working and passionate Computer Science and Engineering's student with huge dreams

## 🚀 LIFE PHILOSOPHY

*"Talent without hard working is nothing!"*

## 💬 LANGUAGES

Native Languages:

Portuguese



Other Languages:

English  
Spanish  
German  
French



## PROFESSIONAL EXPERIENCE

### App Designer & Developer

#### U.Porto Media Innovation Labs

 September 2018 – December 2018

 Porto Center, Porto, PT


 <https://mil.up.pt/>  [https://sigarra.up.pt/feup/pt/web\\_page.inicial](https://sigarra.up.pt/feup/pt/web_page.inicial)

 <https://www.bright.pt/>  <http://www.acreditar.org.pt/>

- Designing and development of the interface of the "Everyone Is a Hero" app for mobile devices' Android and iOS operative systems
- Designing of the mobile app in Adobe Illustrator CC and Adobe Photoshop CC
- Development of the mobile app in Unity 3D, C#, SQL and JSON
- The "Everyone Is a Hero" app was developed with the collaboration of U.Porto Media Innovation Labs, Faculty of Engineering of University of Porto (FEUP), Bright Digital and Acreditar
- The app aims to offer interactive support and information to families, educators and volunteers of children who suffer of cancer diseases
- Other goal of the app, it's to, in a near future, be linked to the video game app for these same children, called "Hope", that's being also developed by Bright Digital
- Presentation in the TalkABit 2019 conference

### Scientific Research & Development Internship

#### LSTS (Laboratório de Sistemas e Tecnologia Subaquática / Underwater Systems and Technology Laboratory)

 October 2018 – November 2018

 Paranhos/São João do Porto, Porto, PT

 <https://lsts.fe.up.pt/>  [https://sigarra.up.pt/feup/pt/web\\_page.inicial](https://sigarra.up.pt/feup/pt/web_page.inicial)

- Scientific Research and Development Internship in Endurance Project in LSTS (Laboratório de Sistemas e Tecnologia Subaquática / Underwater Systems and Technology Laboratory) at Faculty of Engineering of University of Porto (FEUP)
- Research and Development Project based in the context of remote control of AUVs (Autonomous Underwater Vehicles) with a continuous operation duration of more than 48 hours, using the RIPPLES and NEPTUS frameworks/tools, developed by LSTS (Laboratório de Sistemas e Tecnologia Subaquática / Underwater Systems and Technology Laboratory)
- Development of some features to RIPPLES and NEPTUS frameworks/tools, using Java and Spring Boot framework

## SOFT SKILLS

### Communication Skills:

Able to Listen

Nonverbal Communication

Persuasive

Reading Body Language

Storyteller

### Critical Thinking:

Adaptable

Artistic Sense

Creativity

Design Sense

Desire to Learn

Flexible

Innovative

Problem Solving

Research

Thinking Outside the Box

Willingness to Learn

### Leadership:

Deal-making

Decision Making

Delegation

Inspiring

Leader

Management

Mentoring

Motivating

Supervising

Talent Management

### Positive Attitude:

Confident

Cooperative

Courteous

Energetic

Enthusiastic

Friendly

Hard-working (18/24)

High Energy

Honest

Patient

Respectable

Sense of Humor

### Teamwork:

Collaborative

Dealing with Difficult Situations

Empathetic

Influential

Networking

Social Skills

Team Player

### Work Ethic:

Attentive

Competitive

Dedicated

Independent

Motivated

Multitasking

Perseverant

Persistent

Planning

Reliable


Resilient


## PROFESSIONAL EXPERIENCE

### Scientific Researcher & Developer

**NOVA LINCS (Informatics' Labs at Faculty of Sciences and Technology, New University of Lisbon - Caparica Campus) and Carnegie Mellon University Portugal Program**

 February 2017 – January 2018

 Monte de Caparica, Setúbal, PT

 <http://hyrax.dcc.fc.up.pt/>

 <http://nova-lincs.di.fct.unl.pt/>  <https://www.fct.unl.pt/>

 <https://cracs.fc.up.pt/>  <https://www.fc.up.pt/fcup/index.php>

 <http://www.cmuportugal.org/>  <https://www.cmu.edu/>

- Scientific Research and Development in Hyrax Project in NOVA-LINCS' Labs at Faculty of Sciences and Technology, New University of Lisbon - Caparica Campus (FCT NOVA | FCT-UNL)
- Research and Development Project based in the context of Edge Computing
- Developing work in the theme "A producer/consumer work queue eventually consistent in Android", under the supervision of Prof. Hervé Miguel Paulino
- Developing of a prototype in Android and Java, called Hyrax - DiCE (Distributed Collaborative Computing at the Edge)
- Final Approval Grade: 17 of 20

### Waiter

**Delmare Café & Beach Club**

 June 2016 – August 2016

 Costa da Caparica, Setúbal, PT

 <http://www.delmarecafe.com/pt-pt>

- Wait service
- Organization of events (Weddings, Bachelor parties, Birthday parties, Night parties & Sunset parties)
- Bar service
- Cleaning service

### Information & Technology Support Technician

**RE/MAX Portugal and MaxFinance Portugal (RE/MAX Central and MaxFinance Central Offices)**

 November 2012 – March 2013

 Rato, Lisbon, PT


 <https://www.remax.pt/>  <https://www.maxfinance.pt/>

- Enterprise's computers maintenance
- Marketing (Production of brochures & leaflets)
- Enterprise's social networks management (Facebook page management of the company)
- Emailing (Sending e-mails & info-mails to company's contacts)

### Professional Intern\Trainee

**Fnac Portugal (Fnac Chiado Store)**

 November 2011 – January 2012

 Baixa-Chiado, Lisbon, PT

 <https://www.fnac.pt/>

- Retail and stock replacement (Sections of Computers, Software, GPS & Mobile Phones)
- Event photographer - "Encontro o Natal ao Anoitecer"
- Final Approval Grade: 17 of 20

## SOFT SKILLS

### Work Ethic:

Results-oriented

Self-directed

Self-monitoring

Self-supervising

Strategic Planning

Time Management

Trainable

## INTERESTS

### Computer Science & Engineering:

2D/3D Programming

Artificial Intelligence

Augmented & Virtual Reality

Autonomous & Intelligent Agents

Big Data

Bioinformatics

Cloud Computing

Compilers

Computational Game Theory

Computer Architectures

Computer Games

Computer Graphics

Computer Networks

Computer Simulation

Computer Systems

Computer Vision

Computing

Concurrency & Parallelism

Cryptography

Cybernetics

Cybersecurity

Data Analysis & Modelling

Data Mining

Data Science

Databases

Distributed Computing & Systems

Edge & Fog Computing

High-Performance Computing

Informatics

Internet of Things

Internet & Computer Network's Security

Logic

Logic Programming

Machine & Deep Learning

Mobile & Pervasive Computing

Mobile Communications

Multi-threading Systems

Neural Networks

Parallel Computing

Quantum Communication

Quantum Computing

Quantum Cryptography

Quantum Internet & Networks

Robotics

# ACADEMIC EDUCATION

## MSc. in Computer Science and Engineering

Faculty of Sciences and Technology of New University of Lisbon  
(FCT NOVA | FCT-UNL)

 January 2019 – Present

 Monte de Caparica, Setúbal, PT

 <https://www.fct.unl.pt/>

 Final Global Points Average: 16 of 20

 Core Courses/Subjects Covered:

- Operations Research
- Intelligent Multi-Agent Systems
- Computer Vision
- Interpreters & Compilers
- Knowledge & Reasoning Systems
- Machine Learning
- Deep Learning
- Network & Computer Systems Security
- Entrepreneurship
- Intelligent Sensors & Actuators
- Web Servers
- Mobile Application Development
- Ubiquitous & Pervasive Applications
- Cloud Computing & Systems
- Concurrent & Parallel Computing
- GPU's Programming
- Clusters' Computing
- Theory of Computational Games
- Data Analysis & Mining
- Cryptography
- Dependable Distributed Systems & Blockchains
- Games & Simulation
- Multimedia Computing
- Web Design & Development
- Quantum Physics & Mechanics
- Quantum Computing

You can view some of my academic and personal projects by clicking in the links below:

- <https://github.com/rubenandrebarreiro/>
- <https://gitlab.com/rubenandrebarreiro/>
- <https://bitbucket.org/rubenandrebarreiro/>
- <https://rubenandrebarreiro.github.io/>

# INTERESTS

## Internet & World Wide Web

Applications:

Back-End Programming

Front-End Programming

Full-Stack Programming

Web & Internet Applications' Design

## Others:

Arts

Business

Computer Engineering

Computer Science

Design

Drawing

Engineering

Enterprise's Management

Fashion

Fitness

Image Editing

Marketing

Multimedia

Music

Photography

Poetry

Science

Scientific Research

Sport

Technology

# PROGRAMMING LANGUAGES

## Imperative Languages:

Pascal

C



## Multi-paradigm Languages:

Visual Basic .NET

C++

Java

OCaml (Objective Caml)

C# (C Sharp)

TypeScript

Python

Go (Golang)

Ruby

Lisp

Scala

Lua

Perl

Julia



## Statically Typed Languages:

Kotlin



## $x^2$ Multi-paradigm Numerical Computing Environments:

MATLAB (Matrix Laboratory)



## Low-level Languages:

Assembly



# ACADEMIC EDUCATION

## BSc. in Computer Science and Engineering

Faculty of Sciences and Technology of New University of Lisbon  
(FCT NOVA | FCT-UNL)

📅 September 2013 – June 2018

📍 Monte de Caparica, Setúbal, PT

🌐 <https://www.fct.unl.pt/>

☀️ Final Global Points Average: 15 of 20

🔍 Scientific Research at NOVA LINC'S Labs

📖 Core Courses/Subjects Covered:

- Calculus & Mathematics Analysis
- Algebra
- Algebraic Geometry
- Logic & Digital Systems
- Discrete Mathematics
- Low-level Programming
- Object Oriented Programming
- Physics
- Logic Programming
- Operative Systems and Architectures
- Data Structures
- Probability Calculus
- Statistics
- Databases
- Functional Programming
- Computer Networks Internet & Network Protocols
- Computer Graphics and 3D Interfaces
- Artificial Intelligence
- Searching Algorithms
- Genetic Algorithms
- Neural Networks
- Modelling of Programming Languages
- Graphs Theory & Algorithms
- Linear Programming
- Distributed Computing & Systems
- Basic Notions of Internet Security
- Multi-Threading

You can view some of my academic and personal projects by clicking the links below:

- <https://github.com/rubenandrebarreiro/>
- <https://gitlab.com/rubenandrebarreiro/>
- <https://bitbucket.org/rubenandrebarreiro/>
- <https://rubenandrebarreiro.github.io/>

# PROGRAMMING LANGUAGES

## 🔗 Markup Languages:

HTML (Hypertext Markup Language) 

XML (Extensible Markup Language) 

## 👉 Interpreted Languages:

JavaScript 

## 💎 Style Sheet Languages:

CSS (Cascade Style Sheet) 

## 🗄️ Object-relational Database Languages:

🏢 Microsoft:

Microsoft SQL Server 

MySQL 

Oracle SQL 

PostgreSQL 

## ? Query and Functional Programming Languages:

XQuery (XML Query) 

## 📄 Server-side Scripting Languages:

PHP (PHP: Hypertext Preprocessor) 

## 📁 Software Modelling Languages:

UML (Unified Modelling Language) 

## 📖 Declarative Languages for Software Modelling:

OCL (Object Constraint Language) 

## 📖 Formal Modelling and Specification Languages:

VDM++  
(Vienna Development Method ++)



## 📁 Declarative Specification Languages:

Alloy 

## 💡 Declarative Logic Languages:

Datalog 

Prolog 

## 📱 Mobile Development Languages:

Android 

iOS 

# HIGH SCHOOL EDUCATION

## Professional Course of Technician of Computer Management and Programming

### High School of Monte de Caparica


 September 2009 – July 2012

 Monte de Caparica, Setúbal, PT

 <https://www.aecaparica.pt/>

 Final Global Points Average: 14 of 20

 Internship at Fnac Portugal (Fnac Chiado Store)

 Final Project - "Scholar Auctions' Website"

 Core Courses/Subjects Covered:

- Operative Systems and Architectures
- Databases
- Basic Notions of Computer Networks
- Web Design
- Web Forms and Users' Data Validations

You can view some of my academic and personal projects by clicking on the links below:

- <https://github.com/rubenandrebarreiro/>
- <https://gitlab.com/rubenandrebarreiro/>
- <https://bitbucket.org/rubenandrebarreiro/>
- <https://rubenandrebarreiro.github.io/>

# PROGRAMMING LANGUAGES

## Preparation Languages for Documents, Papers and Articles:

TeX



# MIDDLEWARE, APIS & FRAMEWORKS

## Hardware, Sensors & Microcontrollers:

Arduino



## Robotics Middleware:

ROS (Robot Operating System)



## APIs:

### 2D and 3D Programming:

WebGL



OpenGL



## Document-oriented Databases (NoSQL):

MongoDB



## Real-time Computer Vision Libraries:

OpenCV



## Open-source Software Graphics Libraries:

Mesa3D (Mesa 3D Graphics Library)



## Open-source Computer Tracking Libraries for Creation of Augmented Reality Applications:

ARToolKit



## Heterogeneous Computing APIs:

OpenCL

(Open Computing Language)



## Centralized Services for Distributed Systems:

Apache ZooKeeper



## Open-source Streams-processing:

Apache Kafka



## VOLUNTEERING

### Civil Rights and Social Action's Volunteer

**Lifeshaker Associação/Upgrading Participation E6G (Civil Rights and Social Action Initiative from Municipal Council of Almada)**

 January 2018 – March 2018

 Monte de Caparica, Setúbal, PT

 <http://www.lifeshakers.blogspot.com/>

- Participation and volunteering in the following social activities: Caparica Photovoice (Photography at Neighborhood), ABC do Judo (Judo's Training Classes), Diz Que Sim (Dancing's Classes), 123 Capacitar (Children's Didactive Games), De Mim Para Nós (Volunteering Services), AJA (Volunteering Services), Up Web (Design & Illustration), Corta o Preconceito (Videos' Productions), Micro Observatório Juvenil (Conversations, Interviews & Talks) and English Explanations (Preparatory School - 5th & 6th Year)

### Education's Volunteer

**ExpoFCT 2016 (Education Annual Event at Faculty of Sciences and Technology, New University of Lisbon - Caparica Campus)**

 April 2016 – April 2016

 Monte de Caparica, Setúbal, PT

 <https://www.expo.fct.unl.pt/>


- The ExpoFCT it's an annual event of presentation of the College and its Educational Offer, that have the main goal to facilitate the choice of the superior formation to pre-university young people, through demonstrations/activities in the following Science and Engineering areas: Cell & Molecular Biology, Biochemistry, Conservation-Restoration, Mathematics, Applied Chemistry, Environmental Eng., Biomedical Eng., Civil Eng., Electrical & Computer Eng., Physics Eng., Geological Eng., Micro & Nanotechnologies Eng. and Chemical & Biochemical Eng.
- Volunteering in the following activities, at ExpoFCT 2016: Fiat Lux - À boleia dos fotões! and Pong

### Education's Volunteer

**AlmadaForma (Education Initiative from High School of Monte de Caparica)**

 June 2012 – July 2012

 Monte de Caparica, Setúbal, PT

 <https://www.almadaforma.net/>

- Craftworks and handicrafts (Social Initiatives from High School of Monte de Caparica and Municipal Council of Almada)
- Management of documents (Certifications and Diplomas of some students that frequented some courses of the AlmadaForma's Training Center in High School of Monte de Caparica)

## MIDDLEWARE, APIS & FRAMEWORKS

### APIs:

#### Cryptography & Internet Security:

Bouncy Castle Crypto



### Web Services:

REST

(Representational State Transfer)



SOAP

(Simple Object Access Protocol)



### Parallel Computing Platform in GPUs:

CUDA

(Compute Unified Device Architecture)



### Run-time Environments:

Node.js



### Frameworks:

#### Intelligent Multi-agent Systems:

JADE

(Java Agent Development Framework)



#### Distributed Cluster-Computing:

Apache Spark



#### Applications and Inversion of Control Containers:

Spring Boot Framework



#### Object-relational Mapping Tool:

Hibernate ORM



#### JavaScript-based Open-source Framework for Front-End Web Applications:

AngularJS (Angular.js)



Vue.js (Vue)



#### PHP-based Open-source Framework for Web Applications:

Laravel



#### Open-source Front-end Framework for Developing Websites and Web Applications:

Bootstrap





## SPORTS

### Gym & Bodybuilding/MMA & BJJ Training Classes

#### Fox Gym/GFTeam Porto (Paranhos)

 September 2018 – September 2018

 Marquês, Porto, PT

 <https://www.foxgym.pt/>

 <http://www.gfteam.site/>  <https://www.fpjjb.com/gfteamparanhos/>

- Gym, bodybuilding, fitness and weight training
- Mixed Martial Arts & Brazilian Jiu-Jitsu training classes supervised by Prof. Alexsandro Almeida "Leko" (BJJ Black Belt Graduated)

### Gym & Bodybuilding

#### Ginásio Super Olímpia

 September 2015 – November 2015


 Laranjeiro, Setúbal, PT

 <https://www.ginasiosuperolimpia.pt/>

- Gym, bodybuilding, fitness and weight training

### Gym & Bodybuilding

#### Ginásio Transformer

 October 2011 – December 2011

 Almada, Setúbal, PT

- Gym, bodybuilding, fitness and weight training

### Soccer/Football

#### Monte de Caparica Atlético Clube (MCAC)

 January 2010 – October 2010

 Monte de Caparica, Setúbal, PT

- Goalkeeper and central back at Junior's team squad
- Football Association of Setúbal's 2nd League Complementary Tournament for Juniors A/Sub 19 players

### Gym & Bodybuilding

#### Girassus Fitness Club

 September 2018 – Present

 Laranjeiro, Setúbal, PT

- Gym, bodybuilding, fitness and weight training

### Swimming

#### Sociedade Filarmónica União Artística Piedense (SFUAP)

 September 1998 – May 2002


 Cova da Piedade, Setúbal, PT

 <https://www.sfuap.pt/>

- Swimming for children by Primary School's recreation centre

## MIDDLEWARE, APIS & FRAMEWORKS

### Frameworks:

 Quantum Computing  
Open-Source Framework  
Cloud-Based for Simulations in  
Quantum Computers  
and Quantum Processors:

QISKit (IBM Q Experience)

● ● ● ● ●

PyQuil  
(Rigetti Computing Forest SDK)

● ● ● ● ●

### Mobile Application Development Frameworks:

Apache Cordova  
Ionic

● ● ● ● ●

● ● ● ● ●

### Document Preparation System:

LaTeX

● ● ● ● ●

## IDES & PROGRAMMING/TEXT EDITORS

### IDEs & Programming Tools:

Eclipse IDE  
Spyder IDE  
NetBeans IDE  
Turbo Pascal

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

### Jet Brains:

App Code  
CLion  
Datalore  
DataGrip  
GoLand  
IntelliJ IDEA  
PhpStorm  
PyCharm  
Rider  
RubyMine  
WebStorm

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

### Microsoft Visual Studio:

Microsoft Visual Code  
Unity3D  
Xamarin for Visual Studio

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

● ● ● ● ●

### Google:

Android Studio

● ● ● ● ●

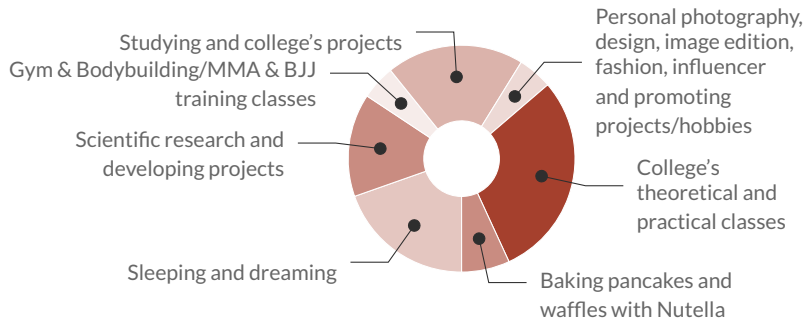
### Apple:

Xcode

● ● ● ● ●



## A DAY OF MY LIFE



## ★ AWARDS AND ACTIVITIES

- Organizer of "Desfile do Caloiro 2015" at Faculty of Sciences and Technology, New University of Lisbon (FCT NOVA | FCT-UNL)
- Winner of "Desfile do Caloiro 2013" at Faculty of Sciences and Technology, New University of Lisbon (FCT NOVA | FCT-UNL)
- Vice-winner of "Baile de Finalistas 2013" at High School of Monte de Caparica (ESMC)

## IDES & PROGRAMMING/TEXT EDIT

### Assemblers, Command-Shells, Compilers & Interpreters:

Free Pascal	● ● ● ● ●
IPython	● ● ● ● ●
Jasmin	● ● ● ● ●
JavaCC (Java Compiler Compiler)	● ● ● ● ●
Low Level Virtual Machine	● ● ● ● ●
Yacc (Yet Another Compiler-Compiler)	● ● ● ● ●

### Hardware, Sensors & Microcontrollers:

Arduino IDE	● ● ● ● ●
-------------	-----------

### Text Editors:

Notepad++	● ● ● ● ●
Atom	● ● ● ● ●
Brackets	● ● ● ● ●
SublimeText	● ● ● ● ●

### PL/SQL Editors:

Oracle SQL Developer	● ● ● ● ●
----------------------	-----------

### Database Development Environment:

Oracle APEX (Oracle Application Express)	● ● ● ● ●
---	-----------

## SOFTWARE PLATFORMS & TOOLS

### Virtualization:

#### Hardware (Independent Hypervisors):

Oracle VM VirtualBox	● ● ● ● ●
QEMU (Quick Emulator)	● ● ● ● ●
VMware Workstation	● ● ● ● ●

#### Operative System Level (Application Containers):

Docker	● ● ● ● ●
--------	-----------

### Data Science:

RapidMiner Studio	● ● ● ● ●
-------------------	-----------

### IoT & Cloud Platforms:

Atmosphere	● ● ● ● ●
------------	-----------

### Hardware Analysis, Design and Synthesis:

Xilinx ISE	● ● ● ● ●
------------	-----------

## DRIVING LICENSE

---

## SOFTWARE PLATFORMS & TOOLS

---

### Software Stack:

WampServer



### Administration Tools:

phpMyAdmin



### Version-control Systems:

#### Web-based Hosting Services:

Atlassian Bitbucket



Azure DevOps



GitHub



GitLab



#### Git Clients:

Atlassian Sourcetree



GitHub Desktop



GitKraken



#### Branching Models for Git:

GitFlow



### UML and BPMN Design Tools:

StarUML



Modelio



## OTHERS

---

### Serializing Data & File Formats:

Google Protobuffers



JSON (JavaScript Object Notation)



### Web Cross-browser

Animated 3D Computer Graphics:

Three.js



### Interactive Diagrams and Graphs on the Web:

GoJS



### Functional Reactive Programming:

Bacon.js



Meteor (MeteorJS)



React (React.js/ReactJS)



## Q SCIENTIFIC RESEARCHES

### Hyrax Project

**NOVA LINCS (Informatics' Labs at Faculty of Sciences and Technology, New University of Lisbon - Caparica Campus)**

📅 February 2017 – January 2018

📍 Monte de Caparica, Setúbal, PT

🌐 <http://hyrax.dcc.fc.up.pt/>

🌐 <http://nova-lincs.di.fct.unl.pt/>    🌐 <https://www.fct.unl.pt/>

🌐 <https://cracs.fc.up.pt/>    🌐 <https://www.fc.up.pt/fcup/index.php>

🌐 <http://www.cmuportugal.org/>    🌐 <https://www.cmu.edu/>

- A 3rd year's scientific research and development project, of the BSc. degree made in FCT NOVA, done between February 2017 and January 2018. This project it's called Hyrax Project (Crowd-Sourcing Mobile Devices to Develop Edge Clouds). This project it's based in the context of Edge Computing. I did this scientific research and development project, representing NOVA LINCS (Informatics' Labs at Faculty of Sciences and Technology, New University of Lisbon - Caparica Campus) and under the supervision of Prof. Hervé Miguel Paulino
- This project, had also the collaboration of Faculdade de Ciências da Universidade do Porto (INESC TEC/CRACS - Centro de Sistemas de Computação Avançada) and Carnegie Mellon University's School of Computer Science
- Developed work in the Services' section of the Hyrax Project, most precisely, developing a data structure (for DiCE section), to be replicated for Mobile and Handheld Devices, in a notion of collaborative network, using Crowd-Sourcing features and shifting all the data processing and information services closer to the final users
- LaTeX Article/Paper (Portuguese Version)
- Final Presentation

## 📖 PUBLICATIONS

### 📄 Scientific Research Papers

- Rúben Barreiro, Pedro Sanches, Filipe Cerqueira and Hervé Paulino (2018). *Hyrax: DiCE - Computação Distribuída e Colaborativa na Periferia*. NOVA LINCS (Informatics' Labs at Faculty of Sciences and Technology, New University of Lisbon - Caparica Campus).

## ⚙️ OTHERS

🔧 Suite of Modular Libraries and Tools to Create Interactive Content on Open Web Technologies:

📦 CreateJS:

EaselJS

TweenJS

SoundJS

PreloadJS

Zöe



👤 Client-Side Web Development Techniques:

**AJAX**

(Asynchronous JavaScript and XML)



🔧 AJAX Frameworks:

**Google Web Toolkit**

(GWT/GWT Web Toolkit)



🏠 Microsoft .NET Libraries Frameworks:

📦 Server-side Open-source Web Development:

**ASP.NET**



👤 Object-relational Mapping:

**LINQ**

(Language Integrated Query)



🎮 2D/3D Graphics and Game Engines:

**Unity**



🏠 Software Libraries for Data Science:

📦 Free and Open-Source Platform Distributions:

**Anaconda**



🌐 Web-Based Interactive Computational Environments:

**Jupyter Notebook**



📈 Software Libraries for Python:

**Matplotlib**

**NumPy**

**Pandas**

**SciKit-Learn**

**SciPy**

**TensorFlow**





## CONFERENCES



### Conference Proceedings

- Bernardo Barbosa, Bruno Pinto, Cláudia Guedes, José Mendes, Manuel Curral, Ricardo Lopes and Rúben Barreiro (2019). "Everyone Is a Hero". In: TalkABit 2019, Faculty of Engineering of University of Porto (F.E.U.P.):  
- Download the Mobile App Demo for Android here.



## OTHERS



### Computer Operating Systems:



#### Linux:

Kali Linux



Linux Mint



Ubuntu LTS



#### Microsoft:

Microsoft Windows



## ARTS



### Graphic Design and Photography:

Adobe Illustrator CC



Adobe Lightroom CC



Adobe Lightroom Classic CC



Adobe Photoshop CC



### Video Editing:

Adobe After Effects CC



Adobe Premiere Pro CC



### Web Development:

Adobe Dreamweaver CC



## BASICS



### Databases:

Microsoft Access



### Documents:

Microsoft Word



### Presentations:

Microsoft PowerPoint



### Spreadsheets:

Microsoft Excel

