

# Esteban FORONDA SIERRA

## 1 Personal Data

PLACE AND DATE OF BIRTH: Colombia | November 2nd 1994  
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GITHUB: <https://github.com/EstebanFS>

## 2 Interests / Hobbies

Coding, Teaching, Programming Challenges, Competitive Programming Contests,  
Learning new things.

### 3 Education

**Current studies:**

System engineering ,Computer Science  
**EAFIT University**(Medellin, Colombia)  
2012-2016 (Expected)

**Current Cumulative (GPA):**

4.39(5.0 scale)

**Computer Science Subjects:**

Programming Fundamentals.  
Principles of software development.  
Programming languages.  
Data structure and algorithms I and II.  
Databases.  
Digital Electronics and Circuits, Digital Logic and Microcontrollers.  
Formal languages and compilers.  
Software engineering.  
Technology Integration Project I and II  
Systemic thinking, Information systems.  
Telematics.  
Computer Graphics.  
Computer Architecture.  
Numerical Methods.  
Special Topics in Telematics.  
Special Topics in Software Development.  
Special Topics in Information Systems.  
Operating Systems  
Programming paradigms  
Operating Systems  
Management of informatic projects  
TCP / IP Networks  
LAN Networks  
WAN Networks  
TI Architecture

**Mathematics Subjects:**

Calculus.  
Predicate and boolean logic.  
Discrete mathematics, Linear algebra.  
Statistics.  
Quantitative Methods.  
Physics.

**Organizations:**

Competitive Programming Seminar.

## 4 Skills and Tools

- Proficient with algorithmic thinking and problem solving
- Most experience using: C++, Java (Desktop and Android),
- Moderate experience with database programming and design using: *MySQL*
- Moderate experience with web programming and design using: *HTML*, *JavaScript*.
- Moderate experience with continuous integration using: *Jenkins*.
- Moderate experience with code quality analyzers using: *SonarQube*.
- Basic experience with mobile programming and design using: *iOS with Swift*.
- Basic experience with web programming and design using: *Ruby on Rails*.
- Basic experience with unit tests using: *JUnit*, *AndroidTestCase*, *XCTest*.
- Basic experience with distributed computing using: *MPI*.
- Tools I feel comfortable with: Git Version Control, Atom text editor, SVN Version Control.
- Operating Systems: Windows, Xubuntu, Mac OS.
- Learning for university projects: Assembler.

## 5 Work Experience

2013 - 2014	<div>Part Mobile Development Team of Duing App</div> <div>I was part of the Development of Duing App, Duing is a social application for mobile devices. My team developed the Android native application for Duing, I focused mainly in consume data from Web Services and management of mobile databases, I had to be really careful, because that application save a lot of user data so aspects like memory, energy and time was really important, all of this based in the UX principles, also I work with graphic interface. Now Duing change some aspects, and it is called Reportt.</div>
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## 6 Projects

1. **BlackJack:** Game of BlackJack created with Java.
2. **Checkers:** Game of Checkers created with Java using Max/Min algorithm.
3. **FilaFacil:** A queue manager for Android, that is, request turns by mobile.
4. **CloudYa:** A Web Image Hosting Application developed in HTML5, CSS3, JavaScript and PHP.
5. **CoffeeStart:** CoffeeShop Cashier Application developed in Assembler.

6. **Numerical:** An Android application in order to interpret numerical functions and evaluate them with different numerical methods learned in the subject Numerical Methods.
7. **Graphics:** Java desktop app with different graphics methods to represent objects and change his properties(scale, rotate, etc).
8. **Nower:** App to recommend special offers based in the user location, the final user(Buyer) app was created in Android, Client (Stores) was created with HTML5 and Javascript with AngularJs and the BackEnd was created with Ruby on Rails.
9. **Programming Lab:** Software developed in C++ that receive a series of tasks descriptions in YAML format and a series of pipes that connect some specific jobs. The software will try to execute the connected jobs and it will show if the task could be completed and his result or could not be complete, doing the same task as if you run for example "echo hello world | c &".
10. **NOTE:** You can find some of those projects on my Github! <https://github.com/EstebanFS>

## 7 Languages

SPANISH: Native (Colombia)  
ENGLISH: Advanced

## 8 Extra-Curricular Activities

- **Course "Data Structures and Algorithm II" - EAFIT University**  
Teacher Assistant:  
January 2015 - June 2015 (Six Months)  
I was the teacher assistant in the course "Data structures and algorithms II", my main aim was to help students to understand many algorithms and topics, explain why those topics are really important in the design of algorithms and how to pass theory into practice. Topics include graphs and their algorithms, complexity, search of patterns, basic dynamic programming, optimization, etc.
- **Competitive Programming Seminar - EAFIT University**  
Lecturer Assistant:  
January 2014 - Present  
I am one Competitive Programming Seminar coordinators in EAFIT University. My work is to explain and teach some topics, problems, and solutions, that's topics include graphs, dynamic programming, ad hoc solutions, greedy algorithms, etc, in order to help teams to improve their abilities in a real programming contest.  
Also I help introducing new people at programming world.

## 9 Extra-Curricular Courses

- **Data Structures and Algorithms - Coursera Specialization**

- **Algorithmic Toolbox**

**State:** Completed

**Chosen Programming Language:** C++

**Summary:** This course give a introduction in the different kind of algorithms(Divide and conquer, Dynamic Programming, Greedy Algorithms, etc) The idea of the course is give at the students tools to affront different kind of problems and the best way to solve it.

- **Data Structures**

**State:** Completed

**Chosen Programming Language:** C++

**Summary:** This course give a definition of many common data structures, structures include Arrays, Stacks, Trees, Dynamic Arrays, Priority queue and Disjoint sets, Binary Search trees (Search Trees, AVL Trees, Splays Trees), also this course give a good explanation of how that structures are implemented in the most common languages and how they works.

- **Algorithms on Graphs**

**State:** Completed

**Chosen Programming Language:** C++

**Summary:** This course give a really good explanation about graphs and their properties, starting with how is the best way to represent it taking care of the number of nodes and edges, going through how to traverse a graph, find a shortest path and minimum spanning tree, all of this, taking special care in time and memory complexity.

- **Algorithms on Strings**

**State:** Completed

**Chosen Programming Language:** C++

**Summary:** This course is oriented to Science and how to use string algorithms to solve many genetic problem, in this course you see topics like Suffix tree, Suffix Array, KMP and Burrows-Wheeler Transformation, each part of the course give the complexity and how the algorithms were evolving from the previous one in order to improve time and memory.

- **Advanced Algorithms and Complexity**

On progress

- **Assembling Genomes and Finding Disease-Causing Mutations - Final Project**

On progress

- You can find more information about this course on the following link : [Data Structures And Algorithms Specialization](#)

- **Certified Scrum Developer (CSD)**  
**State:** Completed  
**Dates:** September 2015 - September 2017  
**Certification Authority:** Scrum Alliance

## 10 Contests

- Participated at the 2012 Colombian Programming Contest ACIS REDIS.
- Participated at the 2014 Colombian Programming Contest ACIS REDIS.
- Participated at the 2015 Colombian Programming Contest ACIS REDIS.
- Participant at the 2016 Colombian Programming Contest ACIS REDIS.
- Participated at the ACM-ICPC South American-North Regionals, November 2014.
- Participated at the ACM-ICPC South American-North Regionals, November 2015.
- Participated in the Google Code Jam 2013, 2014 and 2015, 2016.
- Participated in the Facebook Hacker Cup 2015.
- Participated in several test contest made by CCPL and RPC(Red de programacion competitiva).
- Solving diferent kind of algorithmic problems in several online judges, such as, UVa, Codeforces, TopCoder, COJ. handle each Judge except TopCoder: EstebanFS handle Top Coder:estebanf01
- You can find some of those solutions in Competitive Programming repository on my Github! <https://github.com/EstebanFS/Competitive-Programming>

## 11 Achievements - School

- **Best Graduation Project, Neosistemas 2011:**  
I won with "Puzzle", a Contable Software, based in the problem of a little company.
- **Distinted Graduates, Neosistemas, 2011**  
Distinction with honors among graduates of my year