

# Sergio García Prado

Software Engineering | Statistics | RPA | Combinatorial Optimization

## social

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## summary

Hi everyone! I'm a double Bachelor's degree graduate in **Computer Engineering** and in **Statistics** from the University of Valladolid, in Spain. I love to solve complex algorithmic problems, especially those related with **Combinatorial Optimization**. Also, I enjoy applying Mathematical and Statistical approaches to develop amazing solutions. Lately, I'm specially curious about **Sequential Models**, **Architectural Patterns** and the **Rust Programming Language**. One of my biggest hobbies is **Competitive Programming**, which I try to practice as much as possible.

## work

2018/06 – present

### Software Engineer

Unlimiteck Company Builder

- Build a fully Autonomous and Unsupervised Testing System based on scraping and intelligent navigation from the ground, being able to detect almost all interface changes and schedule navigation paths towards more susceptible bug areas.
- Design and Develop a remote computing protocol, currently used by the company as the standard data sharing strategy.
- Propose, define and assist in the implantation of a Python + VCS packaging strategy around the company, firstly over Subversion and currently over Git
- Take part in a Car Damage Detection system based on image analysis mostly approached with Depth Learning strategies.

### Software Engineer Intern

- Design and Develop the implementation of a fully functional Vehicle Routing solving suite achieving results equivalent to another commercial alternatives, but with an easy-to-use and extensible to client requirements design.

2018/03 – 2018/08

### Research Assistant Intern

University of Valladolid

- Develop an ETL pipeline fully written in R which helped a Research Group in the task of knowing what vehicle's internal parts have been damaged, given many metrics from the external ones.
- Help speeding up intensive computation functions initially written in R with C++ bindings.

2016/06 – 2016/08

### Software Engineer Intern

Brooktec

- Develop a Song Polling plugin for WordPress.
- Maintain already established PHP projects, applying client update requests.

## education

2017 – 2020

**BSc. Statistics, 7.925/10.0**

University of Valladolid

- Enforce algorithmic skills mostly on operations research subjects, analyzing combinatorial optimization problems especially those related with Vehicle Routing Problems (VRPs).
- Enrich mathematical knowledge mostly on calculus and theoretical statistics related subjects.
- Thesis title: Scalable solving methods for the Dial-a-Ride Problem.
- High marks: Operation Research Models (Hons), Statistical Computing, Categorical Data Analysis.

2019

**Erasmus+, Statistics, 28/30**

Università di Bologna

- Abroad experience during 6 months on a foreign country and different language (classes taught in English).
- Depth understanding of the Generalized Linear Model (GLM).
- High marks on: Statistical Models and Applications, Advanced Survival Analysis.

2013 – 2017

**BSc. Computer Engineering, Computation, 7.885/10.0**

University of Valladolid

- Build a problem-solving mentality, focused mostly on the how-to-do and analysis of implications of the available approaches.
- Interest for mostly algorithmic subjects, but also paying special attention to the ones related with software engineering topics.
- Thesis title: Algorithms for Big Data: Graphs and PageRank.
- High marks: Algorithms and Computing (Hons), Codes and Cryptography (Hons), Parallel Computing (Hons), Operating Systems Structures (Hons), Data Mining, Machine Learning Techniques, Web Services and Systems, Fundamentals of Computer Networks.

## competitive programming

- **Advent of Code 2020**: Fully finished on time (Christmas day).
- **LeetCode's Biweekly Contest 39**: 199/6047 (3.3% top).
- **LeetCode's Biweekly Contest 37**: 99/8250 (1.2% top).
- **Tuenti Challenge 9**: 61st position.
- **Google's HashCode 2019**: 20th of Spain and 801th of the world.
- **Google's HashCode 2018**: 1th of Hub and 30th of Spain.
- **UC3M's T3chFest 2017**: 17th position.

## projects

- **grafo**: High performance network modeling and analysis (starting...) - Rust
- **Helpacket**: Open source and collaborative platform against COVID-20 (discontinued) - Django + Vue.js
- **jinete** High Performance solving suite for the Pickup and Delivery Problem (part of FDP) - Python
- **ng-katex**:  $\text{\TeX}$  math expressions processing on browsers boosted by KaTeX (1K/week downloads) - Angular
- **TFGraph**: Graph networks processing on GPUs (part of FDP) - Python