

# Sergio García Prado

Software Engineering | Statistics

## social

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## summary

I am a double bachelor's degree graduate in **Computer Engineering** and in **Statistics** for the University of Valladolid, in Spain. I love solving complex algorithmic problems, especially those related with **Combinatorial Optimization**. Also, I enjoy applying Mathematical and Statistical approaches to develop amazing solutions.

## work

- |                   |  |                            |
|-------------------|--|----------------------------|
| 2022/07 – present | <b>Software Development Engineer II</b>  | Amazon Web Services (AWS)  |
|                   | <ul style="list-style-type: none"><li>• Team: AWS - Auto &amp; Industrial Solutions</li></ul>  |                            |
|                   | <b>Software Development Engineer I</b>   | Amazon Web Services (AWS)  |
|                   | <ul style="list-style-type: none"><li>• Team: AWS - Industry Products - Automotive</li><li>• Build greenfield AWS service for automotive customers using serverless architecture (Lambda, Step Functions, DynamoDB, S3, ECS, etc.).</li><li>• Develop full-stack solution with Kotlin, Python and TypeScript languages, and AWS CDK for Infrastructure as Code</li><li>• Deliver end-to-end service from concept to implementation, designed for automotive industry use cases at scale.</li></ul>   |                            |
| 2021/04 – 2022/06 | <b>Software Engineer</b>   | Clariteia                  |
|                   | <ul style="list-style-type: none"><li>• Build a Microservices Framework, heavily inspired by the Domain-Driven Design ideas, known as the Minos Framework.</li></ul>   |                            |
| 2018/06 – 2021/04 | <b>Software Engineer</b>   | Unlimiteck Company Builder |
|                   | <ul style="list-style-type: none"><li>• 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.</li><li>• Design and Develop a remote computing protocol, currently used by the company as the standard data sharing strategy.</li><li>• Propose, define and assist in the implantation of a Python + VCS packaging strategy around the company, firstly over Subversion and currently over Git</li><li>• Take part in a Car Damage Detection system based on image analysis mostly approached with Deep Learning strategies.</li></ul> |                            |
|                   | <b>Software Engineer Intern</b>  |                            |
|                   | <ul style="list-style-type: none"><li>• Design and develop a fully functional Vehicle Routing solving suite achieving results equivalent to another commercial alternatives, with an easy-to-use and extensible to client requirements design.</li></ul>   |                            |

- 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.
- 2016/06 – 2016/08     **Software Engineer Intern**     Brooktec
- Develop a song polling plugin for WordPress.

## 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).
  - Deep 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

- **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