Galo Castillo-López

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I am an Ecuadorian MSc. in Computer Science student, following the Artificial Intelligence track at Université Paris-Saclay, France. I worked as a Data Scientist at the largest Ecuadorian telecommunications company from 2019 to 2021. In 2018 I participated at Google Summer of Code and interned at a project of The Linux Foundation. My research interests include natural language processing, computational social sciences and ML for social good.

Research Experience

2017 - 2020 **Research Assistant**, Escuela Superior Politécnica del Litoral
Supervised by Prof. Carmen Vaca
Contributed at the Big Data Research Group, developing ML based methods for modeling social behavior. Used NLP, social networks analysis and spatio temporal data mining techniques to discover patterns in social media platforms, online news, and mobile phone data.

Publications

- **A place to go: Locating damaged regions after natural disasters through mobile phone data**. Castillo-López, G. et al. Annual International Symposium on Information Management and Big Data (pp. 239-251). Springer, Cham, 2019. Peer-reviewed. Available online.

- **The good, the bad and the ugly: Workers profiling through clustering analysis**. Estrada-Cedeno, P. et al. 2019 Sixth International Conference on eDemocracy & eGovernment (ICEDEG) (pp. 101-106). IEEE. Won the Best Paper Award. Peer-reviewed. Available online.

- **The silence of the cantons: Estimating villages socioeconomic status through mobile phones data**. Castillo, G. et al. 2018 International Conference on eDemocracy & eGovernment (ICEDEG) (pp. 172-178). IEEE. Peer-reviewed. Available online.

- **Requiem for online harassers: Identifying racism from political tweets**. Lozano, E. et al. 2017 International Conference on eDemocracy & eGovernment (ICEDEG) (pp. 154-160). IEEE. Peer-reviewed. Available online.

Conference Posters

- **Detecting damaged regions after natural disasters using mobile phone data: The case of Ecuador**. Castillo-López, G. et al. LXAI Research workshop at NeurIPS 2020. Peer-reviewed.

- **Analyzing global and local news differences in Latin America**. Castillo-López, G. et al. The 12th International Conference on Social Informatics, SocInfo 2020. Peer-reviewed. Speaker.

- **Understanding Latin American citizens concerns through online newspapers**. Estrada-Cedeño P. et al. Accepted at 10th Latin American Web Congress 2019, The 2019 World Wide Web Conference. Peer-reviewed.

Professional Experience

Dec 2019 - Aug 2021 **Data Scientist**, Claro Ecuador
Analyzed and modeled the behavior of telecommunications services customers using machine learning and statistical techniques. Worked with Customer Service, Marketing and Finance departments.
- Developed postpaid mobile churn prediction models and reduced churn rate by 21% using tree-based ML methods. Used model explainability algorithms to interpret predictions and improve retention strategies.
- Developed a prepaid mobile churn prediction model and improved churners detection rate by 5X. Designed and ran A/B tests to identify best retention offers and monitor model performance.
- Implemented classification models to improve prepaid mobile users migration to postpaid services. Reduced migrated customers defaulting rate by 43%.
- Created visualization dashboards to monitor ML models performance and conducting EDA.

Aug-Dec 2019 **Data Engineer**, Telconet LATAM
Developed and maintained data warehouse components.
- Built data pipelines and processing jobs to extract, transform, load and integrate data from various sources using Python and SQL.
- Managed analytical databases to construct on demand datasets for data analytics projects.

May-Aug 2018	**Software Engineer Intern**, SPDX, Google Summer of Code
	Selected to intern at SPDX, a project of The Linux Foundation, as a participant of Google Summer of Code 2018 to develop open source technology. Work summary available online.
	• Designed and implemented web modules using Javascript, Python and Django web framework to optimize the registration and validation of new software licenses that use the SPDX standard.
	• Designed and implemented tests automation on Python software components.
Feb-May 2018	**Software Engineer Intern**, Escuela Superior Politécnica del Litoral
	Worked at the Center of Vision and Robotics on RESCLIMA, a web application that displays interactive visualizations for researchers from Academia and local governments.
	• Developed jobs for reading, storing and processing data from weather stations using C and Python.
	• Implemented ad-hoc queries using PostgreSQL and Full Text Search.
	• Fixed bugs on the front-end component using Javascript and Vue.js web framework.

Education

2021 - 2023	**Master of Science in Computer Science**
	Université Paris-Saclay, France
	Specialization in Artificial Intelligence
2014 - 2019	**Bachelor of Science in Computer Science**
	Escuela Superior Politécnica del Litoral, Ecuador
	Specialization in Big Data Analytics
	Relevant coursework: Artificial Intelligence, Distributed Systems, Algorithms Analysis, Linear Algebra, Data Mining.

Programming Tools

Programming Languages:	Python, Java, R, Go, Javascript
Databases:	PostgreSQL, MySQL, MongoDB, Exasol, Db2, SQLite
Miscelleneous:	AWS EC2, Selenium, CARTO, Tableau, NLTK, gensim, Sklearn, Django, gin-gonic

Other Activities

- President of the Web and Mobile Technologies Research Group (TAWS) at Escuela Superior Politécnica del Litoral 2017-2018. Member of TAWS from 2016 to 2019. Organized events, worked on technological social projects and gave talks about programming and data science topics.

- Volunteer local organizer and instructor of Hour of Code from 2016 to 2019 at Guayaquil, Ecuador. Introduced low-income middle school students to programming through computer games.

- LatinX in AI workshop volunteer at NeurIPS 2020.

- Part of the organizing team of DataJam 2018 and DataJam 2019, two Datathons about predicting clients behaviour on the telecommunications and bank markets respectively.

- Volunteer instructor at Rails Girls Guayaquil community from 2018 to 2019 at Guayaquil, Ecuador. Introduced women into software development to reduce the gender gap in STEM fields.

Honors and Awards

- Won the Best Paper Award at 2019 Sixth International Conference on eDemocracy & eGovernment (ICEDEG).

- Won the first place at *Hackathon BdP*, a software prototyping national competition organized in 2018 by Banco del Pacífico, the largest Ecuadorian public bank.

- Won the second place at *Crack The Building: Hacking Utopia*, a predictive modeling competition organized in 2017 by the University of Fribourg and SwissPost, Switzerland.

- Selected as the best Programming Fundamentals course teaching assistant for the 2016 academic year at Escuela Superior Politécnica del Litoral.

Teaching Experience

2015 - 2019   **Undergraduate Teaching Assistant**, Escuela Superior Politécnica del Litoral
Dictated 5 to 10 lecture hours of reinforcement classes per week, graded quizzes and classwork, and held office hours to help students with the difficulties they had about the topics of the following courses:

- Data Mining (2018-2T)
- Programming Fundamentals (2016-1T, 2016-2T, 2017-1T, 2019-1T)
- Programming Languages (2017-1T)
- Linear Algebra (2015-2T)