

# Sara Iris Garcia

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## EDUCATION

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### Coventry University

Coventry, UK

*MSc Data Science and Computational Intelligence - Distinction*

*Nov 2019*

- Dissertation: Meta-learning for skin cancer recognition using Deep learning techniques. Supervisor Dr. Alireza Daneshkhah. (presented at a NeurIPS 2019 workshop) *Read here.*
- Awarded Chevening Scholarship

### Mariano Galvez University

Guatemala

*BSc Computer Science*

*May 2018*

- Final Project: Implementation of a sentiment classification model for microblog texts in Spanish. *Read here.*
- Student award recognition

## RELEVANT WORK EXPERIENCE

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### Data Scientist

Feb 2020 – Jul 2020

*Healthcare.com | Python, Docker, Altair*

*Guatemala*

- \* Conducted time series data analysis to forecast revenue and expenditure for online marketing campaigns with less than a 5% error rate which helped to improve the budget allocation.
- \* Performed statistical analyses to target marketing campaigns according to user demographics.
- \* Presented and explained technical complex concepts and summarised insights to the head of the company in a concise and understandable manner.
- \* Investigated new methodologies and workflows to improve the company's data science pipeline.

### Data Analyst

Nov 2017 – Sep 2018

*Freelance | Python, Flask, Scrapy, Django, D3.js, React*

*Guatemala*

- \* Conducted several data analysis projects for small and medium-sized enterprises.
- \* Developed interactive dashboards and web applications to showcase valuable insights.
- \* Created web scrapers and secure APIs for data consumption.
- \* Delivered personalized programming lessons and mentoring.

### Machine Learning Intern

Aug 2017 – Dec 2017

*Design Engine | Python, Flask, AWS Lambda, EC2*

*Guatemala*

- \* Developed an NLP model for a graphic design company to automate the classification of customer requests to reduce the time for the ticket assignments.
- \* Evaluated new technologies and the implications in the design of new solutions for the clients.

### Social Media Data Analyst

Jan 2017 – Sep 2017

*Allied Global, BPO | Python, R, Node.js, D3.js, Tableau, PowerBI, Javascript*

*Guatemala*

- \* Provided social media insights for clients about the engagement of the brand with their clients and the competition.
- \* Led the development of a real-time dashboard to visualize different performance metrics and recommendations.
- \* Built web scrapers for different websites to collect information about the clients to create a recommendation system to schedule calls.

### Software Developer

Jan 2011 – Dec 2016

*Empresa Portuaria Quetzal | PowerBuilder, Java, PHP*

*Guatemala*

- \* Conducted systems analysis and design of quality management applications.
- \* Developed automated report generators for decision making.
- \* Documented processes according to the ISO 27000 specifications.
- \* Directed interviews and gathered systems requirements from internal users for the senior developers.

## TEACHING EXPERIENCE

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### Lecturer

Feb 2020 – Jun 2020

*Mariano Galvez University*

*Guatemala*

- \* Designed course material, assignments, course activities, papers, and projects for computer science courses in Artificial Intelligence and Systems Analysis.
- \* Supervised final-year projects of more than 50 undergraduate students.
- \* Prepared and delivered lectures regularly for undergraduate students.
- \* Planned course curriculum.
- \* Guided class discussions and debates amongst students.
- \* Conducted further research into their specific topics

## AWARDS AND HONORS

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### Chevening Award

2019, UK

*Fully-funded scholarship supported by the Foreign and Commonwealth Office (FCO).*

### PAISS-INRIA AI Summer School Program

2019, France

*Full sponsorship received to attend the program. (unable to attend due to immigration restrictions).*

### ITEC Scholarship

2015, India

*Fully-funded scholarship to attend a Specialized course on Big Data Analytics.*

### Information Security Research Contest (2nd place)

2010, Argentina

*Awarded research paper "GPU and Heuristics in Antivirus".*

## PROJECTS

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### Meta-learning for skin cancer detection | *Python, Pytorch, Keras, Matplotlib*

Aug 2019 – Oct 2019

- \* Study on the automatic skin cancer detection using a Meta-learning approach for dermoscopic images. The aim of this study is to explore the benefits of the using images of everyday objects for the classification of medical image data. In this study, a small sample of a combined dataset from 3 different sources was used to fine-tune a ResNet model pre-trained on non-medical data. (*Resnet, CNN*) [*Code*].

### Comparative study on the classification of Thyroid diseases | *Python, scikit-learn*

Mar 2019 – Apr 2019

- \* Comparison of feature selection techniques and resampling methods for balancing the class distribution of a dataset for thyroid disease classification, such as Random oversampling SMOTE and SCUT. (*SVM, Random Forest*) [*Code*].

### Fuzzy Logic Controller for a Mobile Robot with Obstacle avoidance behaviour

Jan 2019 – Mar 2019

- \* Design and simulation of a Fuzzy Logic Controller (FLC) for controlling a mobile robot with obstacle avoidance behavior in indoor environments. The FLC takes three inputs from the readings of nine ultrasonic sensors, and two outputs to generate a voltage value for each of the two wheel motor. The FLC was designed in Fuzzy logic toolbox of MATLAB and simulated in V-REP. (*Simulating Annealing*) [*Code*].

### Implementation of a sentiment classification model for microblog text written in Spanish

Apr 2018

- \* NLP model for polarity scoring of tweets in Spanish. This project involved the development of a scraper to build the dataset, an API to schedule the fetched data to save it into a database, a web application for tagging the samples with a user interface, and an API to consume the model. (*NLP, SVM, Naive Bayes*)[*Code*].

## POSTER AND CONFERENCE PRESENTATIONS

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**Conference presentation: Fairness in Machine Learning:** Neurips 2020 Peru

**Conference presentation: A review of gap-filling techniques for time-series data:** Pycon Hong Kong 2020

**Poster session and presentation: Meta-learning for skin cancer detection using deep learning techniques:** NeurIPS 2019 workshop

**Conference presentation: Addressing Class Imbalance in Machine Learning:** Pycon Thailand 2019

**Conference presentation: Build APIs in no time using Flask:** Pycon Spain 2018

**Conference presentation: Free GPU in Google Colaboratory:** Google I/O Extended Guatemala 2018

**Conference presentation: Big Data 101: Analytics on the Cloud:** Coesys Guatemala 2016

## LEADERSHIP EXPERIENCE

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**Women in Data Guatemala:** Chapter Lead  
**Papers we Love Guatemala:** Chapter Lead  
**PyLadies Guatemala City:** Chapter co-Lead

## TECHNICAL SKILLS

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**Languages:** Python [3 years], Java[1+ year], SQL (Postgres, MySQL, MS SQL Server, Oracle, MongoDB)[6+ years], JavaScript [3+ years], HTML/CSS [3+ years], R [1+ years]

**Frameworks:** Django, React, Node.js, Keras, Flask, Laravel, Scrum, Jira

**Relevant Tools:** Git, Docker, Vagrant, VS Code, Visual Studio, PyCharm, AWS, Eclipse, Jupyter notebook, Tableau, PowerBI

**Libraries:** pandas, NumPy, Matplotlib, Dask, Scrapy, scikit-learn

**Operating Systems:** Linux(Debian, Ubuntu), Windows

## LANGUAGES

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**English:** Professional proficiency

**Spanish:** Native

## REFERENCES

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References provided upon request