

# Valeria Vera

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## EDUCATION

### Master of Science in Data Science and Analytics

08/2022 – 05/2024

Georgetown University

USA

- Elected courses: Natural Language Processing, Large Language Models, Reinforcement Learning, Optimization, Deep Learning

### Bachelor of Engineering in Information Technology - Cum Laude

08/2015 – 11/2020

Benemerita Universidad Autonoma de Puebla (BUAP) - Computer Science department

Mexico

- Thesis: Misogyny detection on short texts through supervised classifiers
- Thesis results presented at Gulf Coast Undergraduate Research Symposium at *Rice University* 10/2021
- Research visit: Natural Language Processing using Java at the *University of Texas* 06/2019 – 07/2019

## WORK EXPERIENCE

### Graduate Technical Intern – Machine Learning

05/2023 – 08/2023

Intel Corporation

Oregon, USA

- Automated data extraction from an Azure SQL database using Python and Kusto, lessening extraction time by 80%
- Conducted an exploratory data analysis on 3 large datasets. Executed data reduction, statistical modeling and correlation analysis
- Implemented unsupervised clustering techniques, evaluated the performance through distance and personalized metrics for costumers, reducing data by 60%
- Coded a Python-based website allowing users to obtain automatic analysis results for any dataset, including the ideal number of clusters and representative values, decreasing analysis time by 90%

### Research Assistant

01/2023 – 05/2023

Center for Security and Emerging Technology

D.C., USA

- Conducted an in-depth review of approximately 100 papers focused on "explainability" in AI systems
- Summarized and categorized the evaluation methodologies, benchmarks, and models adopted in the papers

### Software Development Engineer

01/2021 – 08/2022

Intel Corporation

Jalisco, Mexico

- Collaborated on a test content generation framework using Reinforcement Learning
- Refactored a Python project legacy code reducing new costumer tools integration time by 60%
- Generated bash scripts for collecting hardware signals and communicating across more than 30 Unix cluster systems
- Debugged software and hardware memory issues in Linux systems in more than 20 Intel products
- Trained a supervised model that predicts electrical conditions variability, cutting analysis time by 92%. Published results as the main author in the Design and Test Technology Conference (DTTC) 2022
- Produced a Natural Language Processing solution that automates test content generation, reducing engineering time by 96% Coauthored in the result's publication in the DTTC 2021

### Software Validation Engineer Intern

12/2019–11/2020

Intel Corporation

Jalisco, Mexico

- Automated test content creation through Python scripts that reduced development time by 85%
- Developed a Client-Server communication model on Python that reduced hardware expenses by 80%
- Designed a supervised model (SVM) for software bugs classification using Natural Language Processing on Python

## HONORS AND AWARDS

### Fulbright-García Robles - COMEXUS

2022– 2024

Grant to pursue a Master's degree in the US

Mexico

### Honorable Mention - National Association of Information Technology Education Institutions

10/2022

National's best career development in Information Technology Award

Mexico

## PROJECTS

### TPU performance prediction using Graph Neural Networks

2023

Optimized performance of Graph Neural Networks for TPU runtime prediction with Keras

### [Walkability impact in D.C.](#)

2023

Collected data with the Reddit API, classified data sentiment using transformers, and created visualizations using Plotly and Javascript

### [Revictimization: a misogyny detection problem](#)

2022

Web scrapped news articles with python and finetuned a pre-trained Large Language Model to detect revictimization with Pytorch

### Math learning support system for kids with ADHD

2019

Developed a WebApp using Unity based on serious games research. Presented at National Congress of Education Technologies CONTE

## ADDITIONAL SKILLS

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<i>Programming skills:</i>	Object-Oriented Programming, Algorithms design, Design Patterns, Intel architecture, Git
<i>Programming languages:</i>	Python, Unix shell language, R, Java, C++, C
<i>Data packages:</i>	Scikit-learn, NumPy, Pandas, Matplotlib, Plotly, Keras, PyTorch, SpaCy, Huggingface
<i>Big data frameworks:</i>	Apache Spark, Hadoop
<i>Languages:</i>	Spanish: Native speaker, English: Proficient
<i>Volunteering:</i>	<a href="#"><i>Google WT</i></a> : Data Science Mentor, <a href="#"><i>Datakind</i></a> : NLP analyst, <a href="#"><i>Looking Further</i></a> : Data analyst <a href="#"><i>Women at Intel Network</i></a> : Machine Learning Mentor, <a href="#"><i>MIT "BP"</i></a> : Python instructor