Estefanía Laverde Becerra

Email: estefanialab26@gmail.com
Phone: +57 300 759 6350

Github: https://github.com/estefaniaLaverde26R

Profile

Professional in Applied Mathematics and Computer Science, with a specialization in Artificial Intelligence. Through educational and professional experience, I am capable of developing *Machine Learning* models and implementing traditional neural networks, *long short-term memory* (LSTM), recurrent (RNN), convolutional, and *Transformer* networks in fields like Natural Language Processing and Computer Vision. I also have knowledge in Prompt Engineering and Agents.

Skills

- **Programming Languages**: Python, MATLAB, C++, SQL, Javascript, Dart, R.
- **Frameworks and Libraries**: Pytorch, Scikit-learn, OpenCV, NLTK, Gensim, Spacy, Modal, SmolAgents, LLMs
- **Tools**: Visual Studio Code, Cursor, Jupyter Notebook, Git.
- **Platforms**: Linux, Windows.
- **Languages**: Spanish (Native), English (C1), French (B1).
- **Soft Skills**: Leadership, Discipline, Time Management, Critical Thinking, Analytical Skills, Problem-Solving, Empathy, and Communication.

Education

- **Universidad del Rosario** — Bogota, Colombia
  Bachelor's in Applied Mathematics and Computer Science; GPA: 4.67 out of 5.0 — *August 2019 - May 2024*
  Specialization Courses: *Machine Learning, Cybersecurity, Introduction to Natural Language Processing, Introduction to Computer Vision, Signal Processing, Software Development Lifecycle Security, Web Development, Mobile Development.*
- **Universidad de los Andes** — Bogota, Colombia
  Master in Systems and Computer Engineering — *January 2025 - Present*

Professional Experience

- **Ressolve S.A.** — Remote
  Machine Learning Research Engineer — *February 2024 - Present*
  - **Responsibilities**: Design, propose, and develop solutions for problems in natural language and audio processing. Additionally, conduct research in Artificial Intelligence and *Machine Learning*, with a focus on *Large Language Models*, *prompt engineering*, and *autonomous agents*.
- **Ressolve S.A.** — Remote
  Intern — *August 2023 - January 2024*
  - **Responsibilities**: Training and improving Natural Language Processing models for token classification.
- **Universidad del Rosario** — On-site / Remote
  Academic Monitor (2-4 hours per week) — *August 2021 - December 2023*
  - **Assignment Description**: Weekly instruction of mandatory sessions for a group of students to reinforce previously reviewed topics for Integral Calculus and Mathematical Thinking courses. Additionally, I provided personalized instruction in Real Analysis, Topology, and Graph Theory courses.
  - **Performance**: Awarded *Best Academic Monitor (2022)* due to significant improvement in students' performance. Received the *Monitor Career Recognition Award (April 2023)*.

Publications

- **Paper: Enhancing DevSecOps practice with Large Language Models and Security Chaos Engineering**: Published in the *International Journal of Information Security*. Tech: AWS and Python (October 5, 2024), available at https://doi.org/10.1007/s10207-024-00909-w.

Awards

- Recipient of the Excellence Scholarship for Women in MACC from Movistar (August 2019 and August 2020)
- Recipient of the Best Academic Monitor Award (2022)
- Recipient of the Excellence Scholarship for Women in MACC from DevSavant (March 2023)
- Monitor Career Recognition Award (April 2023)
- Distinction in Rosarista Excellence Awards (May 2023)
- Academic Excellence Diploma for achieving the highest academic GPA among graduates (May 2024)

Projects

- **DeliveryInsight Agent**: Developed an autonomous agent that reproduces code executions to generate insights and explanations for customer deliverables. Tech: Python, LLMs (GPT), prompt engineering, smolagents.
- **Music Recommendation System on Spotify (Machine Learning)**: Implemented supervised learning models and neural networks to recommend songs based on user preferences. Tech: Python.
- **Recurrent Model Training Automation - AutoRNN (*Natural Language Processing*)**: Developed a tool to automate and simplify the training of recurrent networks for token classification. Tech: Python, Modal.