

Salvador Robles Herrera

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EDUCATION

The University of Texas at Austin (UT Austin) GPA: 4.00
Master of Science in Computer Science (Concentration in ML & AI) *Expected: May 2026*
The University of Texas at El Paso (UTEP) CS GPA: 3.94, Math GPA: 4.00
Double Degree: Bachelor of Science in Computer Science and Mathematics *Graduated: May 2024*
Concentrations: Data Analytics (ML) and Statistics (Data Science)
Relevant Coursework: Deep Learning, Machine Learning, Neural Nets, Computer Vision, Data Structures, Adv. Object Oriented, Abstract Algebra, Linear Algebra, Convex Optimization, Adv. Operating Systems, Algorithms.

LANGUAGES & TECHNOLOGIES

Languages: (Proficient) Python, Java, C, C++, SQL, Scala, R; (Familiar) Haskell, HTML/CSS, JavaScript, Dart, PHP.
Technologies: TensorFlow, PyTorch, Pandas, NumPy, Apache Spark, MySQL, GCP, spaCy, OpenCV, Git, Unix/Linux.

EXPERIENCE

- Uber (Machine Learning Engineer Intern)** May 2022 - Aug 2022
- Integrated ML into the DataK9 platform, which automates the categorization of exabyte-scale data, categorizing over 200k out of **400k datasets**. Gave architectural ideas for combining multiples signals from ML.
 - Developed data pipelines using Scala and Apache Spark to collect and preprocess data for ML model training.
 - Outperformed classification accuracy by **5%** (93%) using advanced ML techniques and feature eng. in Python.
- Google (Software Engineering Intern)** May 2021 - Aug 2021
- Worked at the Cloud AI Industry Workflow team helping on the migration orchestration from Borg to Vertex AI.
 - Added support for scalable vector matching relying on container's local volume (Python) in recommendation sys.
 - Implemented a multi-threaded handler to copy data from internal storage systems to Google Cloud Storage.
 - Worked in **C++ affecting thousands** of Recommendation pipelines, currently running in production.
- Google (STEP Intern)** May 2020 - Aug 2020
- Created "**GoSafe: Routes for Women**" in collaboration with two interns, a Web App built for women that displays safer routes avoiding user-submitted crime reports between you and your destination (**HTML/CSS**).
 - Designed and implemented an obstacle avoiding recursive algorithm that finds the safest route possible for women (**JavaScript**). Used Java Servlets to store crime user-reported information through the Directions API.

RESEARCH EXPERIENCE

- Responsible AI and Fairness in ML & Theoretical Research** Jan 2022 - Aug 2024
- Contributed as first author on **6 published** peer-reviewed research papers, accumulating **2332 downloads** and **9 citations**. Including one 15-minute oral presentation at top software engineering conference, FSE 2024, in Brazil.
 - Experimented with mathematical approaches to explain computational heuristics with knowledge from Neural Networks. Explored multiple areas such as deep learning, statistics, uncertainty, and optimization.

Selected Publications

- "**Predicting Fairness of ML Software Configurations**", *20th International Conference on Predictive Models and Data Analytics in Software Engineering*; Salvador Robles, V. Monjezi, V. Kreinovich, A. Trivedi, S. Tizpaz-Niari.
- "**When is Deep Learning better and When is Shallow Learning Better: Qualitative Analysis**", *International Journal of Parallel, Emergent and Distributed Systems*; S. Robles Herrera, M. Ceberio, V. Kreinovich.

HONORS AND ACTIVITIES

- Awards:** Outstanding Undergraduate Student in Mathematics Award (Top student), Top Academic Award Scholarship Summa Cum Laude (Highest Honors) – Mathematics & Computer Science, Dean's List x9
- Mathematics Olympiad:** Participated in 5 national math competitions in Mexico (2013-2019), 3x Silver, 2x Bronze medals
- The Coding Interview Club (Officer)** Aug 2020 - May 2024
- Coached 50 students on developing Problem-Solving skills by hosting bi-weekly organization sessions.
 - Led members to land their first internship through resume reviews and java-oriented mock interviews.
- Other Clubs:** (Member) Machine Learning and Data Science Club UT Austin, Texas ACM, Hispanic Association of Computer Scientists. (Activities) Weightlifting trainer, soccer, chess, reading Dostoevsky, sustainable gardening.