

# Luis Lascano

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## Education

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**B.S. Computer Science, Georgia Institute of Technology** 📄 Dec 2023 | Atlanta, USA

- **Concentrations:** Artificial Intelligence, Modelling, and Simulations
- **Affiliations:** GT Society of Hispanic Professional Engineers (SHPE)

## Professional Experience

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**AI Software Developer Intern, Sabadell Bank - Miami Branch** 📄 May 2024 – present | Miami, USA

- **Project 1:** Developed an AI based API 📄 for converting manually inputted postal address entries to ISO-20022 Hybrid standard address backed by Attention Mechanisms, and Tokenization through Google's BERT.
- Augmented the existing address data using Google's GeoCoder API.
- Networked Docker images containing FastAPI and Nginx for express deployment and service lifting.
- Reformatted 10k+ postal addresses with my custom built Python based FastAPI.
- **Project 2:** Developed a Java based AI Automaton 📄 crawler to capture and parse manually inputted data from Excel given some approximate cell order into XML.
- Parsed 1000 client credit analysis Excel Forms into XML structured directories in less than 20 minutes runtime (vs. 60 hours manual work) using Java concurrent threads.
- Created a user-friendly field-escaping tool for future Excel forms to Database migrations.
- Found critical inconsistencies between T24 (backend) and Credit Department documents using XSD verification.

**Machine Learning Teaching Assitant, Georgia Tech** 📄 Jul 2023 – Dec 2023 | Atlanta, USA

- Transformed course assignments from static 2-D to dynamic 3-D interactive plotly visualizations resulting 25% increase of student engagement.
- Used Anaconda and Pycharm to recreate 4+/week common student bugs
- Provided class-wide online live feedback to clarify corresponding theory.
- Graded 1000+ ML questions, 30+ QA Online replies, hosted 3 hours weekly in-person technical office hours.
- Mentored 4 Machine Learning Final Course projects.

## Skills

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**Languages** — Python, Java, C, JavaScript, ARM Assembly, HTML5, SQL, **Technologies** — PyTorch, TensorFlow, Sci-kit, Pandas, Matplotlib, NumPy, Docker, Anaconda, JupyterLab, GitHub, React, MySQL, Plotly, JSON, GeoJSON, OpenCV, BERT, CSS, D3.js, Tableau, PySpark, DataBricks, Latex, Stable Diffusion, GCC (GNU Compiler Collection), JetBrains IDEs, LLM (Large Language Models), Linux, Maven, **Relevant Courses** — Data Structures, Computer Networking, Adv. Algorithms, Computer Vision, Robotics, Web Dev, OOP, Combinatorics, Operative Systems, Processor Architecture, Transformers, Reinforcement Learning, Machine Learning, Deep Learning, Data Visual Analytics, Automata Theory

## Projects

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**Wine Recommendation Tool, Deep Learning Final Project** 📄 Sep 2023 – Dec 2023

- Developed a Deep Learning-based Wine Recommendation Tool by engineering a GRU-based NN architecture. Incorporated BERT embeddings for preprocessing and utilized pyTorch layers to construct a generative model with inputs tokenized word-space and output space a selection of over 300 wine types.
- Achieved 83% train accuracy and 70% test accuracy, showcasing the model's robustness and effectiveness in real-world scenarios.

**GTSam Cloud Point Processing, Autonomous vehicle navigation** 📄 Oct 2022 – Dec 2022

- Built a cloud point processing + route planning model with GTSam (Python) toolbox capable of reconstructing a map of the environment using a 360 Lidar and a Camera.

**Movie Recommendation Analysis, SVD prediction with Vector Analysis** 📄 Apr 2023

- Developed a movie recommendation analysis pipeline integrating a software prediction method based on previous population behavior and rating using PCA.
- Leveraged tensor broadcasting through NumPy to enhance processing efficiency, achieving a remarkable RMSE of 1.0166.

**Atlanta Crime Data Analytics,** 📄 Nov 2021 – Dec 2021

*Police Station Location vs Crime Reports* 📄

- Conducted Atlanta crime data analytics, utilizing a K-means optimization clustering model with a multi parameter (distance + crime-type) kernel.
- Identified optimal police station locations that would result in a 31% reduction in crime proximity plus grouping of crime-types. Processed using PySpark engine.