Agustin Leon

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EDUCATION

New York University, Tandon School of Engineering   New York City, USA
Master of Science in Computer Engineering   *Sep 2024 – May 2026*
- GPA: 4.0/4.0
- **Graduate Teaching Assistant** for foundations of computer science course including algorithm design, data structures, operating systems and system architecture. **Taught and mentored cohorts of over 200 students.**
- **Courses:** Machine Learning, MLOps, Deep Learning, Foundations of Robotics, Embedded Systems, Computing Systems Architecture. **Upcoming:** Computer Vision, Reinforcement Learning, Transformers-NLP-LLMs.

University of Chile   Santiago, Chile
Bachelor of Science in Economics (distinction)   *Mar 2013 – Dec 2017*

PROJECTS

'Spotify Buddies' – Full ML Pipeline for Playlist Recommender | *MLOps, Docker, Ray, FastAPI*   Present
- Full-stack ML system to recommend organic user-created playlists based on musical taste similarity, using dual-model architecture (user pairing via KNN + playlist ranking via BPR).
- Leading training and experiment tracking with MLflow, and hyperparameter optimization using Ray.
- Integrated the system with a CI/CD pipeline on Kubernetes using Docker, Prometheus, and FastAPI for serving, load testing, and degradation monitoring.

LoRA Fine-Tuning with Domain-Adaptive Data Augmentation | *PyTorch, HuggingFace, PEFT*   Mar 2025
- Fine-tuned a RoBERTa-base model using Low-Rank Adaptation (LoRA), reducing trainable parameters to 917K.
- Improved model robustness with domain-adaptive data augmentation by fine-tuning GPT-2 to generate 12k synthetic text samples from unlabeled data using custom randomized prompts to prevent overfitting.
- **Ranked 1st out of 400 participants** in a **Kaggle competition**, with 93.8% validation and 86.95% test accuracy on a held-out OOD test dataset

Image classification with parameter-constrained ResNets | *PyTorch, Data Augmentation*   Feb 2025
- Trained a light ResNet with less than 5-million parameters on the CIFAR-10 dataset.
- Achieved 96% test accuracy on held-out test data, applying diverse techniques for data augmentation.

Certify: Yelp-like web application for cars listings | *JavaScript, Node.js, MongoDB*   Jan 2021 – Dec 2021
- Developed a full-stack web application from scratch featuring the listings creation, image uploads, geocluster map, search filters, user reviews system, user authentication, and authorization, including deployment.
- Implemented a full-stack web application using JavaScript, Node.js, ExpressJS, and MongoDB. Designed RESTful APIs and implemented security best practices.

EXPERIENCE

Associate Research Consultant   Jan 2022 – Sep 2024
GBA ECONOMIC CONSULTING   *Santiago, Chile*
- Conducted quantitative research for **over 15 projects** for leading national and international companies across industries, including energy, telecom, transportation, intellectual property, antitrust, among others.
- Delivered presentations both in English and Spanish for diverse audiences, including C-suite executives.
- Enabled clients to achieve over $10M in savings, decreased costs, and increased profits.
- Top clients included Mastercard, Engie, Cargill, Transelec, LATAM Airlines, DirecTV, Sacyr, and Sonacol.

Data Scientist   Jul 2019 – Dec 2021
MINISTRY OF EDUCATION, GOVERNMENT OF CHILE   *Santiago, Chile*
- Led a data science team to develop a machine learning model for student dropout prediction, integrating high-volume, unstructured, and noisy datasets from multiple government agencies.
- Increased accuracy from ~50% to 80% compared to the previous naive baseline.
- Model results influenced policy measures to mitigate increased school dropout rates during the pandemic.

Technical Skills: Languages: Python, C/C++, JavaScript, R | **ML/DL:** PyTorch, TensorFlow, scikit-learn, Keras, ONNX | **Web:** REST APIs, Node.js, Apache, FastAPI | **Tools:** Git, Docker, AWS, GCP, ChameleonCloud | **Data:** Numpy, Matplotlib, MongoDB, MATLAB | **Robotics:** ROS2