Julián Lopez Baasch

[AI, ML] Engineer
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PRINCIPAL INTERESTS

I'm Julian, an AI Engineer deeply passionate about NLP and CV. My journey is driven by a hunger for learning and building meaningful AI solutions. With experience in Python, PyTorch, and more, I've led projects from idea to reality, including a multimodal search platform at TrendFlow. I believe in AI's transformative potential and enjoy bridging the gap between tech and non-tech stakeholders. Eager to keep exploring and innovating in the world of AI.

EMPLOYMENT HISTORY

AI Developer
Jan 2024 - Present

Stefanini EMEA, Madrid, Spain

- Led and contributed to LLM applications for legal document data, enhancing project efficiency.
- Developed efficient data extraction pipelines using NLP and LLMs, including advanced RAG with agents and knowledge graphs.
- Leveraged OpenAI Python SDK, Langchain, LlamaIndex, Autogen, and Anthropic SDK to optimize LLM solutions.
- Established an MLOps framework with MLFlow and Azure, improving experiment tracking and tool integration.
- Curated and fine-tuned datasets for LLMs (e.g., Llama2, Mixtral) to significantly enhance performance.

AI Engineer, Co-founder
Jan 2023 - Present

TrendFlow, Remote

- Developed an AI-powered fashion search engine with CLIP embeddings, enhancing product discovery and user experience.
- Led full-stack development with ReactJS and Flask, ensuring a responsive UI and robust backend.
- Managed deployment with CloudRun and Docker, achieving scalable, cloud-optimized solutions.
- Automated data aggregation from top fashion e-commerces using Beautiful Soup and BigQuery, enriching platform offerings.
- Created an LLM agent for the TrendFlow API, delivering an engaging conversational assistant with LangChain and OpenAI.
- Fine-tuned CLIP with data from 30+ retail brands, improving search engine precision and performance.

Sr. Machine Learning Engineer
Jun 2021 - Dec 2023

Olipay, Remote

- Deployed a Machine Learning model monitoring dashboard with Dash, Docker, and CloudRun, enhancing workflow efficiency.

- Implemented MLFlow+Papermill for experiment tracking, boosting efficiency and accuracy.
- Refactored ML pipelines, reducing inference time by 50%.
- Designed a multi-step feature selection algorithm to mitigate overfitting in deployed models.
- Developed custom feature engineering modules in Python with SciKit-Learn Transformers.

Machine Learning Consultant   Dec 2019 - Mar 2022

As a consultant, I have helped startups from LATAM and the USA to build Machine Learning solutions to their business problems.

Lead Data Scientist   Feb 2021 - Jun 2021

Bimo, Buenos Aires, Argentina

- Engaged with management to understand needs and develop effective solutions.
- Crafted a comprehensive data model supporting marketing, product innovation, and business growth.
- Engineered a graph-based recommender system with Python and NetworkX, increasing Monthly Spend Per User by 5%.
- Streamlined data pipelines to BigQuery and spreadsheets for real-time stakeholder use.
- Designed insightful dashboards for stakeholders using Dash and DataStudio.

Sr. Data Scientist   Nov 2019 - Feb 2021

Banco Galicia, Buenos Aires, Argentina

- Led a data science team to design, execute, and deliver impactful data products using company and external data.
- Trained and deployed NLP models to classify social media comments, unlocking insights via opinion mining, accessible through a RESTful API.
- Conducted web scraping of key Latin American e-commerce platforms, providing a steady source of daily sales leads.
- Developed and deployed a model to detect fraudulent social network users based on profile picture and description analysis.

Sr. Data Analyst   Jul 2016 - Jul 2018

Presidencia de la Nacion, Buenos Aires, Argentinas

Sr. Econometrics Analyst   Mar 2014 - Jul 2016

DIRECTV Latin America, Buenos Aires, Argentina

- Executed analytical solutions to address data-driven challenges in the Customer Experience regional office.
- Designed a model to measure repeated TV content across channels using the Jaccard Index.
- Built a predictive model to anticipate prepaid recharge behavior based on real-time analysis of media, sports, and social events.
- Developed a logistic regression model to predict customer satisfaction based on comprehensive journey records.

ACADEMIC BACKGROUND	***M.Sc. in Intelligent Systems*** 2019 AI-ML Group, Universitat Pompeu Fabra, Barcelona, Spain

- Conducted research in Multi-Agent Reinforcement Learning (MARL) under the guidance of Professor Martí Sànchez-Fibla.
- Thesis title: "Estimating Loss Aversion in Human Behavioral Data: A Bayesian Approach using Reinforcement Learning."

M.Sc. in Economics   2014   Universidad Torcuato Di Tella, Buenos Aires, Argentina

- Conducted research in quantitative finance under the guidance of Professor Nicolás Merener.

Bachelor's in Economics   2011   UTDT, Buenos Aires, Argentina

- Minor in Mathematics and Statistics

IN-DEMAND SKILLS

- Proficiency in: Machine Learning, Deep Learning, NLP, Computer Vision, Deployment, RESTful API Development, Web Scraping, and Leadership.

TECHNOLOGICAL STACK

- Programming Languages: Python, SQL, Flask, Git, Node.js, Pytorch, PyG, SciKit-Learn, Scrapy, BS4, NetworkX, OpenCV, HuggingFace, Spacy, ReactJS, MLFlow, Dockerm Kubernetes, Google Cloud Platform (GCP), LangChain, OepnAI API, vector-embeddings

PROJECTS

- TrendFlow - A multi-modal semantic search engine for fashion discovery that leverages OpenAI's CLIP embeddings.
  Skills: Vector embeddings, PyTorch, LangChain, ReactJS, CloudRun, BigQuery, Firebase, Devops, Software design

- TwitterGuardian Bot - An AI-powered bot that detects and alerts fake users attempting to impersonate real companies, safeguarding brand reputation on social media.
  Skills: Python, NLP, Computer Vision, Twitter API, CloudRun, AppEngine, BigQuery, Devops, Software design

- Traffic Network Environment for Multi-Agent Reinforcement Learning - A PyTorch-powered implementation that enables experimentation with Multi-Agent Reinforcement Learning in a simulated environment modeled after the Braess Paradox.
  Skills: MARL, Python, PyTorch

- YOLOv5 for Logo Detection in videos - A finetuned object detection model for detecting logos in videos and measuring sponsorship and brand visibility.
  Skills: Python, PyTorch, OpenCV