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 Dokuso. 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 2024 - Present
Stefanini EMEA, Madrid, Spain

- Collaborated on LLM applications for handling legal document data, contributing as well as leading project management tasks.
- Developed pipelines to assess LLM-powered tools, utilizing Langchain and OpenAI API.
- Devised metrics based on similarity to evaluate the effectiveness of LLM applications.
- Established an ML Operations (MLOps) framework using MLFlow and Azure, enabling experiment tracking across various LLM tools, including alternative chains, splitters, embeddings, and vector databases.
- Curated instructional datasets for fine-tuning and fine-tuned open-source LLMs (e.g., Llama2, Mixtral, etc.) to enhance their performance.

AI Engineer, Co-founder 2023 - Present
Dokuso, Remote

- Developed an AI-powered fashion search engine, integrating CLIP embeddings for enhanced product discovery and user experience.
- Led full-stack development using ReactJS and Flask, ensuring a seamless, responsive UI and robust backend functionality.
- Managed deployment processes using CloudRun and Docker, showcasing proficiency in developing scalable, cloud-optimized solutions.
- Automated product data aggregation from top fashion e-commerces using Beautiful Soup and BigQuery, significantly enriching the platform's offerings.
- Developed an LLM (Large Language Model) agent interfacing with the Dokuso API, creating an engaging conversational assistant, utilizing LangChain and OpenAI.

Sr. Machine Learning Engineer 2021 - Present
Olipay, Remote

- Effectively deployed an Machine Learning model monitoring dashboard using Dash, Docker, and CloudRun, resulting in improved efficiency in the workflow.
- Successfully implemented MLFlow+Papermill to track large experiments and compare results, improving efficiency and accuracy.

- Refactored existing Machine Learning pipelines, resulting in a 50% decrease in inference time.
- Designed and implemented a multi-step feature selection algorithm based on univariate and wrapper methods to mitigate overfitting in deployed models.
- Developed custom Machine Learning feature engineering modules in Python using SciKit-Learn Transformers.

Machine Learning Consultant 2019 - 2021
As a consultant, I have helped startups from LATAM and the USA to build Machine Learning solutions to their business problems.

Lead Data Scientist 2021
Bimo, Buenos Aires, Argentina

- Actively engaged in daily management meetings and individual consultations with managers to understand their needs and develop effective solutions.
- Crafted a comprehensive data model to support all business units and their diverse needs, including marketing engagement, product innovation, and business growth.
- Engineered a machine learning graph-based recommender system utilizing Python and NetworkX, resulting in a substantial 5% increase in Monthly Spend Per User.
- Streamlined data pipelines from various business sources to BigQuery and spreadsheets for real-time utilization by stakeholders.
- Designed and implemented insightful dashboards for multiple stakeholders using Dash and DataStudio.

Sr. Data Scienitst 2019 - 2021
Banco galicia, Buenos Aires, Argentina

- Demonstrated leadership skills by guiding a data science team in designing, executing, and delivering impactful data products utilizing both company data and external sources.
- Trained and deployed NLP models to accurately classify comments and posts in popular social networks such as Twitter, Instagram, and Facebook, unlocking valuable insights through opinion mining. This model was made easily accessible through a RESTful API.
- Conducted web scraping of key e-commerce platforms in Latin America, resulting in a consistent source of daily sales leads.
- Proactively tackled fraud by developing and deploying a model capable of detecting fraudulent users in social networks, based on profile picture and description analysis.

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 ProfessorNicolás 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

- Dokuso - 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