Jorge Vančo Sampedro

Mathematical Engineering and Artificial Intelligence
Senior Year Student
Madrid, Spain

📞 (+34)-684034765
✉ jorge.vanco.sampedro@gmail.com
 JorgeVanco
 jorge-vanco-sampedro

EDUCATION

- **Exchange Student – Senior Year** *Aug/25–Present*
  University of Illinois at Urbana-Champaign (UIUC)
  Coursework: Applied Parallel Programming, Deep Generative Models, Reinforcement Learning, Advanced NLP
- **Bachelor's Degree in Mathematical Engineering and Artificial Intelligence** *Sep/22–Present*
  Universidad Pontificia Comillas ICAI (Madrid) *GPA: 9.58/10 – 21 Honors Distinctions*
  Coursework: Deep Learning, NLP, Machine Learning, Autonomous Robots, Big Data, Operating Systems

WORK EXPERIENCE

- **Research Assistant** *Sep/25-Present*
  Collaborating with Professor Roy Choudhury (UIUC) in Deep Generative Models research.
  Contributed to ICLR 2026 submission: Contrastive Diffusion Guidance for Spatial Inverse Problems
- **Teacher Assistant for Foundations of Artificial Intelligence and Machine Learning** *Sep/24–Present*
  Teacher assistant of the Foundations of Artificial Intelligence and Machine Learning courses at the Universidad Pontificia Comillas.
- **ISC Racing Team** *Jun/23–Jun/25*
  Involved in the development of an autonomous car to compete in Formula Student competitions.

PROJECTS

- **LLM from Scratch**
  End to end implementation of LLM training on multiple GPUs (Tokenization, Pre-training, Post-training).
- **News Alert Generation**
  Multimodal news monitoring system integrating **Named Entity Recognition** (NER) and **Sentiment Analysis**.
- **HELOC Repayment Prediction**
  Detailed **technical report** on performance and **explainability** of ML models (SVM, XGBoost, etc.) for credit scoring.
- **AI Scheduler Agent**
  Designed and built an AI agent to create personalized schedules by integrating **Google Calendar and Tasks APIs**.
- **Stable Diffusion from Scratch**
  Implemented Stable Diffusion from scratch; **cut generation time of v1.5 from 8 minutes to 15 seconds**.
- **Image Generator**
  Developed multiple image generation models in PyTorch, including VAE, GAN and Diffusion Models.

ADDITIONAL TRAINING

- **CS336: Language Modeling from Scratch** – Stanford *Jul/25*
  Built large language models from scratch; **Top 3 global leaderboard position** for training run
- **Hugging Face Agents Course** – Hugging Face *Apr/25*
  Autonomous AI agents, SmolAgents, LangChain
- **Reinforcement Learning Specialization** – Univ. of Alberta *Dec/24*
  Value/policy methods, function approximation

SKILLS

Machine Learning/AI: PyTorch, Hugging Face, vLLM, Scikit-learn, RL, GANs, Diffusion Models, LLMs
Programming: Python, Cuda, C#, R, JavaScript, Bash
Databases: MongoDB, MySQL, Neo4J, Redis
Tools: Git/GitHub, Linux, W&B, ROS, Matlab, AWS, React, HTML/CSS, PySpark, Agile Methodology
Soft Skills: Diploma in Personal, Communication, and Professional Skills

LANGUAGES

Spanish:	Native language	
English:	Advanced level	Cambridge C1 Advanced – *Jun/22*
French:	Intermediate	DELF B1 – *May/22*
Chinese:	Basic level	HSKK – *Jun/24*
German:	Basic level	A2 Level at Universidad Pontificia Comillas – *May/24*

AWARDS AND RECOGNITIONS

- Participated in the 30th edition of the International Mathematics Competition representing Universidad Pontificia Comillas ICAI (Summer 2023).
- First prize in the local phase (La Rioja) and bronze medal in the 35th Spanish Physics Olympiad.
- Silver medal in the local phases of the 57th and 58th Spanish Maths Olympiad Editions (La Rioja).