

Junior Francisco Garcia Ayala

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Google Scholar

EDUCATION

New York University

Brooklyn, NY, United States of America.

Master of Science (M.Sc.) in Computer Science; GPA: 3.951/4.0

September 2023 – December 2025

- **Courses:** Human-Computer Interaction, Human-Centered AI, Advanced Analysis of Algorithms, Big Data Systems.
- **Awards:** Full tuition, stipend, and housing support awarded through a graduate research assistantship.

New York University Abu Dhabi

Abu Dhabi, United Arab Emirates

Bachelor of Science (B.Sc.) in Computer Science; GPA: 3.6/4.0

Aug. 2017 – May 2021

- **Courses:** Machine Learning, Computer Graphics, Large-Scale Web Applications, Computer Networks, Operating Systems.
- **Awards:** UAE 10-year Golden Visa for outstanding academic achievement; full-ride 350,000 USD merit scholarship.

EXPERIENCE

Adobe

San Jose, California, United States of America

Machine Learning Engineer 2

January 2026 – Present

- Assigned to work full-time on Adobe Experience Platform's AI team, contributing to the Agent Orchestrator, an agentic layer designed to serve enterprise business needs at scale using AI agents.

Machine Learning Engineer Intern

May – August 2025

- Designed and built an AI agent using LangChain, OpenAI GPT-4o, and full-stack web development (React, FastAPI) for Adobe Experience Platform that predicts customer support errors before adverse business impact. The agent improves error remediation rates by 43.9% and boosts customer support engineer productivity by 49.6% compared with existing tools. Paper accepted to the AAAI 2026 Demonstration Track; poster under review at ACM CHI 2026.

Human-Data Interaction Lab at NYU Abu Dhabi

Abu Dhabi, United Arab Emirates

Research Assistant

September 2021 – May 2025

- Partnered with a Google DeepMind researcher to design AI agents that assist legal mediators in resolving group conflicts, applying human-AI collaboration principles in partnership with the Abu Dhabi Global Market's dispute resolution center.
- Co-authored and engineered an award-winning research project (ACM CIKM Best Paper Award Top 1%) that mitigated data void misinformation in search engines and knowledge graph embedding models, achieving 95% improvements over the baseline in data-void misinformation mitigation; leveraging high-performance computing, large-scale web scraping, and machine learning techniques.
- Served as primary author (ACM CSCW 2024) and lead engineer for a collaborative real estate search platform (React.js, Node.js, PostgreSQL) that reduced decision-making friction by 10% for distributed teams through asynchronous multi-user search features.
- Mentored and guided 5+ undergraduate student interns, enabling direct contributions to research projects.

DTCC Digital Assets (formerly Securrency)

Abu Dhabi, United Arab Emirates

Software Engineer (Automated Quality Assurance)

December 2020 – May 2021

- Contributed to the development of a blockchain-based FinTech platform enabling asset tokenization and liquidity by leveraging distributed ledger technology, smart contracts, and compliance automation.
- Designed and implemented 300+ automated test cases using Pytest, Python, and SQLAlchemy, reducing manual QA time by over 60% and improving release cycle efficiency.
- Collaborated in an Agile/Scrum environment with developers, QA engineers, and business analysts to ensure product quality, uncover defects early, and maintain regulatory compliance.
- Reviewed and enhanced 10+ product requirements and API specifications, providing technical recommendations that improved system reliability and integration accuracy.

SKILLS SUMMARY

Programming Languages: Python, JavaScript/TypeScript, C/C++, SQL, Java, HTML/CSS, Bash Scripting

Technical Expertise: Machine Learning (ML), Deep Learning, Artificial Intelligence (AI), Data Science, Natural Language Processing (NLP), Large Language Models (LLMs), AI Agent Development, Conversational AI, Retrieval-Augmented Generation (RAG), Prompt Engineering, Multi-Agent Systems, Full-Stack Web Development, Front-End Development, Back-End Development, End-to-End Development, Database Systems (PostgreSQL, MySQL), Distributed Systems.

Libraries and Tools: Git/GitHub, Docker, Kubernetes, Node.js, React.js, p5.js, Pytest, D3.js, Figma, SQLAlchemy, GraphQL, Spring, Django, Flask, FastAPI, PyTorch, TensorFlow, Jupyter Notebook, LangChain, Hugging Face, OpenAI API, Linux.

Human Languages: English (Native Proficiency), Spanish (Native Proficiency).

Research: Author of four research papers in premier HCI and AI venues, including CSCW, IJCAI, AAAI, and CIKM.

Fun Facts: Long-distance runner and marathoner (40 km weekly); Honduran Eagle Scout.

1. Sujan Dutta*, Junior Francisco Garcia Ayala*, Pranav Pujar*, Sai Sree Harsha, Dan Luo, Nikhil Vasudeva, Bikas Saha, Pritom Baruah, and Yunyao Li. 2026. PAGER: Proactive Monitoring Agent for Enterprise AI Assistant. In *Proceedings of the 40th AAAI Conference on Artificial Intelligence (AAAI-26), Demonstration Track*. Association for the Advancement of Artificial Intelligence, Singapore. <https://aaai.org/>
2. Shuai Feng, Wei-Chuang Chan, Srishti Chouhan, Junior Francisco Garcia Ayala, Srujananjali Medicherla, Kyle Clark, and Mingwei Shi. 2025. Whispers of Many Shores: Cultural Alignment through Collaborative Cultural Expertise. In *NewInML Workshop at ICML 2025*. <https://arxiv.org/abs/2506.00242>
3. Miro Mannino, Junior Garcia, Reem Hazim, Azza Abouzied, and Paolo Papotti. 2025. Data Void Exploits: Tracking & Mitigation Strategies (Extended Abstract). In *Proceedings of the Thirty-Fourth International Joint Conference on Artificial Intelligence, IJCAI 2025, Montreal, Canada, August 16-22, 2025*. ijcai.org, 10927–10931. <https://doi.org/10.24963/IJCAI.2025/1218>
4. Junior Francisco Garcia Ayala, Miro Mannino, and Azza Abouzied. 2024. "I'll Pay Half the Cost, for the Loft" — From Searching to Agreeing on Group Property Rentals. In *Companion of the 2024 Computer-Supported Cooperative Work and Social Computing (CSCW Companion '24)* (San Jose, Costa Rica). ACM, New York, NY, USA, 7 pages. <https://doi.org/10.1145/3678884.3681908>.
5. Miro Mannino, Junior Garcia, Reem Hazim, Azza Abouzied, and Paolo Papotti. 2024. Data Void Exploits: Tracking & Mitigation Strategies. In *Proceedings of the 33rd ACM International Conference on Information and Knowledge Management (CIKM '24)* (Boise, ID, USA). ACM, New York, NY, USA, 11. <https://doi.org/10.1145/3627673.3679781>. **Best Paper Award (top 1%)**.

* denotes equal contribution.