

MANUEL HIDALGO SOLÁ

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EDUCATION

Columbia University M.S. in Computer Science Current coursework: Advanced Computer Security (Prof. Suman Jana); Build an Agent Startup (Prof. Junfeng Yang); Advances in Visual Generative Models (Prof. Aleksander Holynski).	New York, NY Sep 2026 - Dec 2027
University of California, Santa Cruz B.S., Major GPA: 3.97/4.00 B.S. in Computer Science, Highest Honors (summa cum laude). Coursework: Artificial Intelligence, Natural Language Processing, Applied Machine Learning: Deep Learning, Computational Methods and Applications, Software Engineering, Vector Calculus.	Santa Cruz, CA Sep 2022 - Jun 2025
Stanford University Summer Session Mathematics Coursework: Linear Algebra and Multivariate Calculus.	Stanford, CA Apr 2021 - Aug 2021

WORK EXPERIENCE

Formal Methods and Reasoning Group, Columbia University Research Assistant - Engineering Manhattan Reasoning, a serverless platform for remote FPGA configuration and execution. - Designing an agentic interface that enables non-electrical engineers to configure FPGAs for hardware-in-the-loop development.	New York, NY Sep 2026 - Present
Wireless and Mobile Networking Lab, Columbia University Research Assistant - Integrating heterogeneous sensing streams into multimodal traffic-verification systems to validate traffic-state estimates. - Optimizing application-aware ML inference placement across mobile, edge, and cloud nodes under latency and resource constraints.	New York, NY Sep 2026 - Present
DAMAI Co-Founder Launched an agentic programming assessment platform to evaluate candidates in AI-assisted software development.	New York, NY Aug 2026 - Present
Nomad Neuroscience Software Engineer - Engineered an iOS medical-device companion app in Swift with Python backend services. - Implemented a closed-loop biphasic electrical-stimulation system that adapts individualized signal parameters for therapy.	London, UK Mar 2026 - Aug 2026
Lederman Lab, UC Santa Cruz Research Collaborator - Designed closed-loop control algorithms in Python for an automated beam epitaxy controller. - Modeled temperature-flux dynamics using Arrhenius relationships to inform controller design.	Santa Cruz, CA Feb 2026 - Jun 2026
Economics Department, UC Santa Cruz Research Assistant Created a Python resampling and Gurobi optimization pipeline for bootstrap inference with non-differentiable equations.	Santa Cruz, CA Nov 2025 - Mar 2026
Jack Baskin Engineering, UC Santa Cruz Teaching Assistant and Mentor Led introductory machine-learning instruction and supported office hours, grading, and student communication.	Santa Cruz, CA Jun 2024 - Jul 2024

SELECTED PROJECTS

Arbitrage Desk Agent AI Agent Developer Automated ingestion, Dutch-book analysis, and execution for cross-sportsbook arbitrage; incorporated price-drift latency, GARCH constraints, and low-liquidity prioritization.	Jun 2026
Inlyne VS Code Client Frontend and Backend Developer Redesigned live synchronization across the web client and VS Code extension using delta-based updates to eliminate full-document retransmission.	Mar 2025
One-shot Image Classifier Machine Learning Engineer Applied transfer learning with Vision Transformers plus CutMix, Mixup, and cGAN augmentation, achieving a 91% test score.	Mar 2025

TECHNICAL SKILLS

Languages & Tools: C, C++, Python, Java, JavaScript, TypeScript, Swift, Shell, MATLAB, PostgreSQL, Git, Docker, Gurobi, CARLA, Scenic. ML & Data: PyTorch, Keras, scikit-learn, NumPy, pandas, Matplotlib, CNNs, Vision Transformers, NLP. Frameworks & Development: React, Spring Boot, Tailwind, Bootstrap, Full-Stack Development.

AWARDS AND CERTIFICATES

Highest Honors in Computer Science, UCSC (Jun 2025); Dean's Honors, UCSC (2022-2025); Undergraduate Deans' Award, UCSC (2022-2025); Data Science, Digital House (Jul 2020); Mathematics for Machine Learning: Linear Algebra, Imperial College London (Aug 2020); Web Design, Coder House (Nov 2017); Languages: English (fluent), Spanish (fluent).