

Jesus Perez Sanchez

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Education

Yale University <i>B.S. in Computer Science</i>	New Haven, CT <i>Aug 2021 – May 2026</i>
Coursework: Data Structures & Algorithms, Machine Learning, Systems Programming, Computer Vision	
Activities & Awards: President & Violinist of Mariachi Luz y Verdad; Office of Educational Opportunity STEM & FGCU Mentor; QuestBridge National College Match Recipient (< 1%)	

Technical Skills

Languages: Python, JavaScript, C, Java, Racket, SQL, HTML/CSS
Frameworks & Tools: React, Node.js, Express, MongoDB, PyTorch, TensorFlow, OpenCV, PsychoPy, Git

Experience

Yale School of Medicine, Levy Neuro Decision Lab <i>Software Developer (Part-Time)</i>	New Haven, CT <i>Apr 2025 – Present</i>
• Architected full-stack behavioral experiments (PsychoPy , Node.js , MongoDB) with a modular cross-platform framework serving 500+ participants, featuring real-time data collection and automated trial generation	
• Developed risk assessment and image valuation systems with multi-phase experimental design and DB integration	
Universidad Complutense de Madrid <i>Research Assistant Intern</i>	
• Led qualitative DAO governance analyses reviewing whitepapers, proposals, Snapshot votes, and community discussions across 70+ blockchain protocols	
• Synthesized findings and presented results to an international research team, including collaborators from Harvard's Berkman Klein Center	
Google Computer Science Summer Institute (CSSI) <i>Software Developer Intern</i>	
• Built interactive JavaScript projects and delivered technical presentations as part of Google's CSSI program	
Silicon Valley Education Foundation <i>Teaching Assistant & College Mentor</i>	
• Delivered computer science and mathematics instruction to 200+ K-12 students across summer programs, accumulating 400+ hours of direct teaching experience	

Personal Projects

Album Cover Genre Classifier (Python, PyTorch, OpenCV, scikit-learn)	
• Built end-to-end ML pipeline classifying 3,200 album covers into 4 genres, comparing 25 hand-crafted CV features (color histograms, GLCM texture, Haar cascade face detection) against deep learning approaches	
• Achieved 40% test accuracy with fine-tuned ResNet-18 (vs. 30% Random Forest baseline); implemented Grad-CAM visualizations to interpret CNN attention patterns across genres	
Text-to-Image Pixel Art Generator (Python, PyTorch, CLIP, OpenAI)	
• Built conditional latent diffusion model generating 16x16 transparent pixel art from text prompts for game development with custom dataset preprocessing	
• Implemented 3-phase training pipeline: autoencoder (256D latent space), DDPM denoising, CLIP text conditioning with cross-attention mechanisms	

Leadership & Volunteering

Develop for Good <i>Product Manager</i>	Remote <i>May 2024 – Aug 2024</i>
• Led cross-functional team migration from web wrappers to native Android/iOS applications for 250k+ user nonprofit platform, coordinating 6-person engineering team with our client's needs	
CodeHaven @ Yale <i>Computer Science Tutor</i>	
• Tutored 60+ K-12 under-resourced students in Scratch programming fundamentals and introductory computer science concepts through weekly sessions	