Ricardo Payares

Software Engineer

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Passionate engineer, philosopher, and digital entrepreneur dedicated to developing ethical and transparent software solutions. With a strong foundation in web technologies and full-stack development, I'm on a mission to create innovative digital products that prioritize sustainability, equity, and social impact.

EXPERIENCE

Bloomberg LP, New York

June 2022 - October 2024

Software Engineer

- Fullstack developer focusing on creating robust and scalable solutions for electronic market making. - Development in JavaScipt, C++, and Python. - Use of a proprietary framework called Rapid for building responsive and interactive user interfaces.
- Custom Formula Service Subject Matter Expert - Deep understanding of data architecture - Formula parsing and calculations
- Domain knowledge in Electronic Market Making and Trading & Analytics - Experience in developing and maintaining real-time trading systems with low-latency requirements - Familiarity with market data feeds and order routing - Knowledge of regulatory requirements and compliance in electronic trading

EDUCATION

USC Jimmy Iovine and Andre Young Academy

June 2026 - Present

Master of Science - MS, Integrated Design, Business, and Technology

NYU College of Arts and Science

January 2018 - December 2022

Bachelor of Arts - BA, Computer Science

- Minors in Mathematics and Philosophy

Fullstack Academy

January 2022 - April 2022

Software Engineering Immersive

PROJECTS

(ETMM) Custom Formula Engine Simulator & Alias Manager

June 2022

- As an Electronic Market Making Workflows (ETMM) team member, I contributed to the Custom Formula Engine service, a critical component of our advanced trading platform. This service parses and evaluates complex, Excel-like formulas used in pricing fixed-income securities.
- Key Contributions: • Developed a robust simulator for efficient testing of custom formulas • Implemented an aliasing functionality to streamline formula management • Created a recall system to optimize performance and recall of saved formulas
- Ongoing Development: • Expanding aliasing capabilities to include custom pricing models • Optimizing alias lookup for improved performance • Continuously enhancing functionality based on user feedback and market demands
- This project was part of an intensive pre-training period, allowing me to gain deep insights into the company's internal technology stack. The experience not only familiarized me with the existing infrastructure of this innovative service but also enabled me to leverage my skills to implement valuable enhancements.
- Following the successful completion of this project and subsequent training, I chose to continue my career growth with the ETMM team as a contributing engineer, where I continue to drive innovation in electronic trading systems.
- This service that I have stood as an internal subject matter expert for has been mentioned as a key recent milestone for the Sell-Side platform: https://www.waterstechnology.com/awards-rankings/7951758/sell-side-technology-awards-2024-best-sell-side-front-office-platform-bloomberg

Bendwell

March 2022

- Led the development of BendWell, an innovative solution revolutionizing physical therapy and exercise routines. This cutting-edge platform leverages artificial intelligence to provide personalized, real-time feedback on exercise form and effectiveness.
- Key Features and Technologies: • Implemented TensorFlow.js and PoseNet for advanced pose estimation • Utilized Google's

Teachable Machine to build custom machine-learning models • Developed an intuitive user interface displaying confidence scores as easy-to-read ratings • Integrated seamless camera access for real-time exercise tracking

- Technical Achievements: • Engineered a robust backend system to process and analyze user movements in real-time • Optimized machine learning models for low-latency performance on various devices • Implemented secure data handling and privacy measures to protect user information
- User Benefits: • Customized stretching routines targeting pain and discomfort from prolonged sitting • Real-time feedback to improve exercise form and effectiveness • Accessible platform for users to combat issues arising from sedentary lifestyles

SpeakSign

September 2018

- SpeakSign is an innovative computer program that leverages Python's powerful Computer Vision library to bridge the communication gap between the deaf and hearing communities. This application utilizes image processing and machine learning techniques to interpret and translate sign language gestures into spoken audio in real time. By capturing hand placements through a camera, SpeakSign employs sophisticated algorithms to recognize and decode various signs, converting them into natural language. The program's ability to provide accurate translations promotes inclusivity and facilitates seamless communication between signers and non-signers. SpeakSign's approach and potential for social impact earned it a top 2 placement in NYU Tandon's Rapid Assembly and Design Challenge, highlighting its impact on assistive technology and its potential to transform the lives of individuals with hearing impairments.

HONORS

Josh Goldfaden Award for Outstanding Contributions to Writing

April 2019

Expository Writing Program - NYU CAS

- Spring 2019 https://cas.nyu.edu/ewp/about/honors-and-awards.html

Nick Russo Award for Outstanding General Engineering Design

December 2018

NYU Tandon School of Engineering

- Received as finalist in NYU Tandon’s Rapid Assembly & Design Challenge

LANGUAGES

English, **Spanish**