

# Bryan Ramirez-Gonzalez

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## EDUCATION

### The University of Southern California

Bachelors of Science in Computer Science, Merit Scholar, Honors Engineering Research Track

Los Angeles, CA

Expected May 2027

- Relevant Coursework: Data Structures, Algorithms, Object Oriented Programing, Discrete Mathematics, Calculus, Linear Algebra, Statistics

## EXPERIENCE

### HUMANS LAB, USC ISI - [github.com/bryanrg22/electionBetsImpact](https://github.com/bryanrg22/electionBetsImpact)

Los Angeles, CA

Summer Undergraduate Research Intern (Election-Bets Impact)

May 2025 - Present

- Constructed a 2.8M+ analysis-ready Twitter/X dataset to study whether real-money prediction-market (Kalshi) moved public influence during the 2024 Presidential Election by leveraging USC HUMAN's lab-built Twitter scraping bot and U.S. presidential-election Twitter/X dataset.
- Measured if market moves lead changes in tweet volume by linking Kalshi data to the tweet timeline using Python (pandas, numpy, matplotlib)

### HUMANS LAB, USC ISI - [bryanram.com/research.pdf](https://bryanram.com/research.pdf)

Los Angeles, CA

Undergraduate Research Intern

August 2024 - May 2025

- Enabled content-safety & youth mental-health research by analyzing a 40k+ TikTok video dataset to flag high-risk periods (COVID, NEDA week) and quantify ED-theme/engagement correlations.
- Boosted insights into eating disorder portrayal with an accuracy improvement of 15% by performing sentiment analysis on more than 100,000 video descriptions and comments using TextBlob and VADER, classifying emotional tone and combining results with Word2Vec embeddings.
- Performed correlation analysis and identified key trends across 50+ engagement metrics (likes, shares, comments), revealing top impactful posts and hashtag usage patterns (e.g., #EDAwareness), using Seaborn and Matplotlib for data visualization.

### Jane Street Capital

New York, NY

Undergraduate Fellow (Unboxed '24; FOCUS '25)

Jul 2024 & May 2025

- Selected as 1 of 37 (Unboxed '24) and 1 of 14 (FOCUS '25) for funded Jane Street fellowships, participating in trader/engineer sessions, including an Estimathon and live trading games, across in-office NYC days.
- Strengthened market-microstructure and data fundamentals by working through ETF fair-value exercises, interpreting order-book depth, and writing introductory SQL; practiced pricing and inventory management under uncertainty in hands-on workshops.

### Melady Lab, The University of Southern California

Los Angeles, CA

Summer Undergraduate Research Intern

July 2024 - August 2024

- Enhanced OpenAI's CLIP Model by improving its ability to detect multimodal misinformation in over 80,000 text-image pairs, focusing on subtle inconsistencies between true text and manipulated images through advanced Multimodal Machine Learning techniques in PyTorch
- Developed a comprehensive, realistic dataset of synthetic misinformation by pairing related but incorrect images with true text, providing over 80,000 challenging examples to improve the model's training, making it more robust against deceptive content compared to random mismatches
- Demonstrated the model's ability to generalize to real-world misinformation scenarios involving sophisticated false image-text relationships, achieving significant improvements in detection capabilities

## ACTIVITY / EXTRACURRICULAR - 3x Hackathon Winner

- **Awards & Select Programs:** HackHarvard Winner, Caltech HackTech Winner, AstroHacks Winner; Jane Street Unboxed Fellowship, Jane Street FOCUS Fellowship, D. E. Shaw's Connect Fellowship, Two Sigma New Seekers Summit, SIG Discovery Day

## PROJECTS

### Lambda Rim (Full-Stack Statistical & ML Hub for NBA Fantasy Betting - [github.com/bryanrg22/lambda-rim](https://github.com/bryanrg22/lambda-rim) / [lambdarim.com](https://lambdarim.com))

Founder & Sole Developer

January 2025 - Present

- Engineered a full-stack forecasting platform (Poisson, Monte Carlo, GARCH) for NBA fantasy picks, achieving 78%+ win rate and bankroll growth from \$10 to \$3,000 in documented runs, all stored in a Firebase Database for all users to access.
- Cut analysis time from 15 min → seconds by building an automated OCR → prediction pipeline (screenshot parsing, NBA API) with ML-derived probabilities and ChatGPT rationales.
- Shipped real-time analysis via React + Vite and Flask on Cloud Run; CI/CD with GitHub Actions and Cloud Functions for background jobs.

### Swerve (Winning Project At CalTech's HackTech Hackathon - [github.com/bryanrg22/CalTech-Hacks](https://github.com/bryanrg22/CalTech-Hacks))

Lead Developer

April 2025

- Reduced procurement cycle time by shipping "Hugo", a LangChain agent routing queries through GPT-3.5-turbo (tool selection) and o4-mini (multi-step reasoning) to predict inventory gaps and auto-push Slack PO recommendations.
- Designed and implemented a React + TailwindCSS dashboard live-streaming stock-out risks, supplier reliability, and shipment paths.
- Built a Flask backend, frontend, and configured Firebase database to streamline data ingestion from ERP systems, CAD files, and user uploads.
- Flown to Dryft's San Francisco offices for on-site collaboration from their software engineering team, to continue developing the project.

## SKILLS

**Programming Languages:** Python, Java, C/C++, SQL, JavaScript, TypeScript

**Frameworks/Tools:** React, Tailwind CSS, Flask, Firebase (Auth, Firestore, Hosting, Cloud Functions), Google Cloud Run, Git/GitHub, GitHub Actions (CI/CD), NumPy, Pandas, Matplotlib