

# Manuel Rodriguez Berdud

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## Education

- BS Mathematics and Physics**, CONCORDIA UNIVERSITY, NEBRASKA Aug 2021 – May 2025
- **GPA:** 3.89/4.0 | **Academic All-American award** – 2024, 2025 | **NAIA Athletic Scholarships** – Tennis & Soccer
  - **Related Coursework:** Advanced Statistics, Diff. Equations, Linear Algebra, Real Analysis, Comp. Physics
- MS Data Science**, FLORIDA POLYTECHNIC UNIVERSITY Aug 2025 – May 2027
- Society of Hispanic Professional Engineers (**SHPE**) Member
  - **Related Coursework:** Comp. Data Analysis, Data & Text Mining, Essential of Data Science with Programming

## Experience

- Graduate Research Assistant**, Florida Polytechnic University – Lakeland, FL Aug 2025 – Present
- Conduct literature reviews, **collect and analyze data**, and support the development of research methodologies
  - Assist in preparing manuscripts, reports, and presentations to **communicate** research findings effectively
  - Collaborate closely with faculty and research teams, contributing to the **planning and execution** of 3+ projects
- Tech Intern**, ViewNext (IBM subsidiary) – Madrid, Spain May 2024 – Jul 2024
- Developed and tested software solutions while collaborating with senior engineers to ensure product quality
  - Generated and refined code using **GenAI tools**, improving accuracy and reducing manual workload
  - Applied **Java programming skills** to support development tasks and optimize application performance

## Projects

- Computational Data Analysis Project** – ML Model Predicting Tennis Match Upsets Aug 2025 – Present
- Collected and cleaned ATP match data using **Python (pandas, NumPy)** for exploratory analysis
  - Engineered features and built classification models with **scikit-learn** and **XGBoost**
  - Applied EDA, data visualization (**Matplotlib, Seaborn**), and cross-validation to assess model performance
- Data Mining Group Project** – NYC Crime Patterns and Safety-Aware Travel Advices Aug 2025 – Present
- Processed NYC crime and event data with **SQL** and **Apache Spark** for large-scale analysis
  - Applied **text mining** and **clustering** to identify event-related crime patterns
  - Built interactive maps using **Folium, GeoPandas**, and **Plotly** for spatial visualization
- Tennis Simulation Project** – Excel-Based Probability Model Apr 2024 – May 2024
- Modeled point-by-point and game-level **probabilities** to simulate realistic tennis scenarios
  - Used **Excel formulas**, **logic functions**, and **data visualization** tools to track and interpret match results

## Skills

**Programming Languages:** Python, R, LaTeX, Java, SQL | **Data Science Tools:** NumPy, Jupyter Notebook, pandas, PyTorch, scikit-learn | **Data Analysis & Visualization:** Excel, Matplotlib, Seaborn, Plotly, GeoPandas | **Software Development:** Git/GitHub, Postman, Swagger, API Testing | **Languages:** Spanish (native) – English (fluent)

## Leadership Experiences

- Dining Service Supervisor**, Chartwells – Seward, NE May 2021 – Aug 2025
- Supervised a team of 6+ employees during daily dining operations
- Tennis Coach**, Weils Tennis Academy – Ojai, CA Jun 2025 – Aug 2025
- Coached 15+ tennis players, leading to better performance in tournaments