# VALENTINA TORRES DA SILVA

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## EDUCATION

**Fairleigh Dickinson University** — **Teaneck, New Jersey**
*Bachelor of Science in Computer Science* — *Anticipated May 2026*

## TECHNICAL STACK

**Programming Languages:** Python, R, Java, JavaScript, Bash
**Frameworks & Libraries:** Scikit-Learn, TensorFlow, PyTorch, Next.js, TailwindCSS, FastAPI, Pandas, NumPy, Matplotlib, Seaborn
**Databases & Cloud Platforms**: AWS (SageMaker, Lambda, API Gateway, CloudWatch, S3), SQL, PostgreSQL (via Supabase)
**Data Skills:** NLP, Supervised Machine Learning (Regression & Classification), Retrieval-Augmented Generation (RAG)
**Software Development/Testing:** API Integration, Front-End Development with Next.js, Bash Scripting for Automation and Testing
**Version Control, DevOps & CI/CD:** Linux, VS Code, Cursor, GitHub Copilot**,** Git
**Languages:** English, Spanish, Portuguese

## PROJECTS

***Long Run*** | *Battle of the Brains "Best Technology Solution" Winner | Team Leader* — *October 2024*

- **Secured 3rd place out of 30+ teams** by delivering a high-performance React.js + Next.js platform in 16 hours, optimizing client-side routing to reduce load times by 35% and improve user engagement.
- Directed a 3-member dev team to design and deploy a multi-page event platform with embedded video, interactive scheduling, and eco-materials showcase, meeting competition criteria under tight deadlines.

***RAG-Enabled AI-Powered Legal Contract Data Extraction*** | *FDU + RSG Media/ Rightsline* — *August 2024 - November 2024*

- Cut legal contract **review time by 70%** by developing a Retrieval-Augmented Generation (RAG) application that automated context-aware data extraction and accelerated content generation.
- Built a FastAPI back end with PostgreSQL (via Supabase) to deliver near-real-time query results, **reducing retrieval latency by 65%** and improving data accessibility for stakeholders.
- Enhanced AI output accuracy by 90% through OpenAI API integration with prompt engineering, resolving critical gaps in contract processing workflows.
- Accelerated delivery by 50% using AI-assisted development tools (GitHub Copilot, Cursor AI, Replit) for rapid prototyping, automated debugging, and streamlined deployment.

***Detection of AI-Generated Social Bots on Twitter*** — *April 2025- May 2025*

- Designed an end-to-end pipeline across classical ML, deep learning, and clustering: preprocessing (**English-tweet filtering ≥70%, normalization**), feature engineering (URL/hashtag/mention counts, profile signals, account age, friends-to-followers), scaling, and consistent splits (70/15/15 for DL; 80/20 for ML).
- Benchmarked KNN (0.86), Logistic Regression (0.87), SVM (0.87), Random Forest (0.86), Bi-LSTM (0.87), and PCA+KMeans clustering (0.88), confirming DL outperformed classical ML on precision/recall/F1 while clustering delivered the top accuracy without labels.

***News Headline Classification with AWS SageMaker*** — *August 2025*

- Fine-tuned DistilBERT on headline dataset using PyTorch + Hugging Face, achieving 96% validation accuracy (loss 0.118).
- Deployed a real-time inference API with SageMaker, Lambda, and API Gateway, delivering predictions in ~1.5s latency.
- Integrated CloudWatch monitoring and S3 model storage to ensure production-ready reliability and cost control.

## WORK EXPERIENCE

**Fairleigh Dickinson University** — **Teaneck, New Jersey**
*Computer & Robotics Lab Assistant* — *August 2023 - Present*

- Improved NAO humanoid AI robot task accuracy by configuring custom Python scripts for multi-step automation workflows.
- Resolved 8+ technical challenges by designing creative code-based solutions, accelerating lab experiment completion and ensuring operational readiness for research demonstrations.
- Researched and implemented emerging AI and robotics techniques to optimize task execution speed and robot adaptability.
- Reduced support request resolution time by 30% by diagnosing and resolving software, hardware, and login issues for {50+} faculty and students weekly.

## AWARDS

**eBay Innovation Scholarship – $5,000** | Mar 2024

- One of only 4 students selected out of hundreds for an essay demonstrating the measurable community impact of a completed technology project.