

Joao Victor Quintanilha

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Education

Tufts University, Medford, MA

Expected May 2026

M.S. in Data Analytics, concentration: Software Engineering

GPA: 3.96

B.S. in Computer Science and Biology

May 2024

- **Relevant Coursework:** Algorithms, Big Data, Data Structures, Machine Learning, Software Engineering, Statistics
- **Awards:** Future Leader Fellow, Palantir Technologies Scholar, Pegasystems Scholar, SHPE Scholar, ACM Fellow
- **2025 ACM Summer School on Data Science in Greece:** Selected (20/500 globally); graduate-level coursework in data streams, graph analytics and sustainable ML

Data and Software Experience

Dimenso, Cambridge, MA

Jan 2026 - present

Software Engineer Intern, AI Integration Team

- Designing event-driven ingestion pipelines (FastAPI, WebSockets) enabling real-time capture of multimodal lab data
- Building document parser (PyPDF2, pdfplumber) with heuristic validation filtering false-positive tables
- Engineered ML table extraction with multi-stage validation (density, header, bullet detection) reducing LLM noise by 20%
- Automated lab instrument data ingestion by integrating email + cloud pipelines linking raw CSV outputs to protocol steps

Tesla, Austin, TX

Sep 2025 - Dec 2025

Software Engineer Intern, Infrastructure Team

- Built React + .NET Core platform for commissioning workflows, enabling real-time data tracking across Tesla's industrial infrastructure projects used for +200 engineers and managers
- Improved platform scalability by refactoring 20k+ lines of code into reusable, configuration-driven React components
- Enabled analytics on 100k+ records by designing normalized SQL Server schemas with FKs, indexes, and audit trails
- Developed and maintained 27+ REST APIs with two-phase validation, integrity checks, and batch ingestion
- Enabled real-time health analytics by normalizing C# error logs and aggregating metrics into Splunk dashboards

German Aerospace Center (DLR), Braunschweig, Germany

Jun 2025 - Aug 2025

Software Engineer Intern, Visual Analytics Web Application

- Increased semantic search accuracy by 35% by building PostgreSQL + pgvector ANN indexes for cosine RAG retrieval
- Enabled multilingual retrieval across 12k+ docs by deploying transformer-based embedding models for semantic search
- Designed REST APIs for vector indexing, retrieval, and metadata management
- Improved analyst productivity by integrating React + MUI dashboards for interactive document exploration

Tufts Human Factor & Ergonomics Society (THFES), Medford, MA

Jul 2023 - Jul 2024

Web Developer, [\[website\]](#)

- Worked under an Agile development methodology, creating a Notion dashboard to integrate and manage all team tasks
- Streamlined maintenance interface by implementing a content management system, allowing owners to update content
- Rebuilt the entire website (36 pages) using JavaScript and HTML/CSS, improving member engagement by 25%

Technical Projects

AI Classics Companion, Palantir Foundry Personal Project, [\[View demo\]](#)

Apr 2025 - May 2025

- Built an AIP app integrating a language model to paraphrase archaic text, enhancing readability in classic literature datasets
- Deployed data workflows in Foundry to extract keywords and generate context-aware footnotes using LLM logic functions
- Engineered NLP pipelines to chunk, paraphrase, and summarize literary passages at scale using Palantir AIP tools

Hi!ckathon, Institut Polytechnique de Paris, Paris, France

Nov 2024 - Dec 2024

AI Solutions Developer (Participant), AI-Driven Mobile Application, [\[Github repo\]](#)

- Won 1st place in Technical Excellence at the Hackathon, for delivering the best model of the event with 69% F1 score
- Trained and integrated a hybrid model (Neural Networks, XGBoost, LightGBM) to predict groundwater levels in France
- Developed a FastAPI to integrate the ML model with an iOS app, enabling real-time predictions through API endpoints
- Applied model to groundwater level forecasting for farmers, converting complex ML outputs into accessible predictions

Skills

Programming: Python, C/C++, C#, JavaScript, PHP

Databases: MySQL, Postgres, MongoDB, Hadoop

Web Development: Node.js, React, HTML/CSS, FastAPI

Cloud and DevOps: Google Cloud Platform, Git, Jira, Splunk

Data: TensorFlow, Pandas, Jupyter, PowerBI, LangChain

Certifications: Graphic Design, AI Science on Supercomputers