

# Joao Victor Quintanilha

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## Education

<b>Tufts University</b> , 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
<ul style="list-style-type: none"><li>• <b>Relevant Coursework:</b> Algorithms, Big Data, Data Structures, Machine Learning, Software Engineering, Statistics</li><li>• <b>Awards:</b> Future Leader Fellow, Palantir Technologies Scholar, Pegasystems Scholar, SHPE Scholar, ACM Fellow</li><li>• <b>2025 ACM Summer School on Data Science in Greece:</b> Selected (20/500 globally); graduate-level coursework in data streams, graph analytics and sustainable ML</li></ul>	

## Data and Software Experience

<b>Dimenso</b> , Cambridge, MA	Jan 2026 - present
<b>Software Engineer Intern, AI Integration Team</b>	
• 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	
<b>Tesla</b> , Austin, TX	Sep 2025 - Dec 2025
<b>Software Engineer Intern, Infrastructure Team</b>	
• 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	
<b>German Aerospace Center (DLR)</b> , Braunschweig, Germany	Jun 2025 - Aug 2025
<b>Software Engineer Intern, Visual Analytics Web Application</b>	
• 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	
<b>Tufts Human Factor &amp; Ergonomics Society (THFES)</b> , Medford, MA	Jul 2023 - Jul 2024
<b>Web Developer, [website]</b>	
• 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

<b>AI Classics Companion, Palantir Foundry Personal Project</b> , <a href="#">[View demo]</a>	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	
<b>Hi!ckathon</b> , Institut Polytechnique de Paris, Paris, France	
<b>AI Solutions Developer (Participant), AI-Driven Mobile Application</b> , <a href="#">[Github repo]</a>	Nov 2024 - Dec 2024
• 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

<b>Programming:</b> Python, C/C++, C#, JavaScript, PHP	<b>Cloud and DevOps:</b> Google Cloud Platform, Git, Jira, Splunk
<b>Databases:</b> MySQL, Postgres, MongoDB, Hadoop	<b>Data:</b> TensorFlow, Pandas, Jupyter, PowerBI, LangChain
<b>Web Development:</b> Node.js, React, HTML/CSS, FastAPI	<b>Certifications:</b> Graphic Design, AI Science on Supercomputers