

Joseph Taddeo

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SUMMARY

Software engineer with a strong foundation in computer science and mathematics, focused on building scalable data pipelines, AI-integrated backend systems, and production desktop applications. Built an ETL system processing 15,000+ items with AI-powered classification (sentence-transformers, GPT integration) that enabled over \$250K in annual revenue for a luxury consignment business.

EDUCATION

University at Albany, State University of New York — Albany, NY — Aug. 2020 – May 2025
Bachelor of Science in Computer Science, Minor in Mathematics

EXPERIENCE

Full-Stack Software Operations Engineer — Feb. 2025 – Present

LuxeSwap — Oyster Bay, NY

- Built a Python ETL pipeline with 60+ category classifiers and 20+ measurement parsers, transforming Excel inventory into structured JSON and templated HTML for eBay deployment at scale (15,000+ items processed).
- Integrated AI-powered classification using sentence-transformer embeddings and fuzzy matching as fallback for unrecognized categories, reducing manual intervention to near-zero.
- Developed OpenAI GPT integration for dynamic brand profiling (history, style niche, estimated retail) with JSON-based caching to minimize API costs.
- Improved operational throughput by 5× and enabled over \$250K in annual revenue capture through automation and workflow optimization.
- Built a self-updating macOS desktop application (Tkinter + PyInstaller) with GitHub release detection for seamless deployment to non-technical operators.
- Developed a sales reconciliation pipeline matching eBay transaction reports to internal listings, automating fee calculations and client payout reporting.

Package Handler — Aug. 2023 – Dec. 2023

FedEx — Troy, NY

- Worked in a high-throughput logistics environment requiring accuracy, efficiency, and adherence to safety and operational standards.

PROJECTS

LuxeSwap E-commerce Platform | *React 19, Express 5, Redis, eBay API*

- Built full-stack luxury consignment platform (40K LOC) with live eBay Browse API integration and Redis caching, aggregating real-time inventory for 61+ luxury brands.
- Implemented 8-language internationalization (i18next) with URL-based routing, hreflang SEO tags, and RTL Arabic support.
- Created custom Puppeteer scraper for AuctionNinja auction data with automated 10-minute cron refresh cycles.
- Designed SEO architecture with dynamic sitemap generation, JSON-LD structured data, and per-brand landing pages.
- Shipped 19 pages and 27 reusable components solo in 6 weeks, deployed on Vercel with GDPR-compliant geo-based cookie consent.

Gen-AI Career Intelligence Platform | *Capstone, Sponsored by Dr. Chidansh Bhatt (IBM Watson)*

- Built core data infrastructure including GPT-powered resume and job listing parsers, transforming unstructured documents into normalized JSON stored in MongoDB Atlas.
- Developed MacroAnalytics system integrating CareerOneStop (Dept. of Labor) and Google Geocoding APIs to generate interactive Plotly choropleth salary maps and occupation statistics across all 50 US states.
- Created InternalAnalytics module with Mapbox integration for geographic visualization of user and job distributions, plus applicant analytics dashboards using Pandas and Plotly.
- Implemented career pathing engine that cross-references parsed resume data with job listings to generate AI-driven optimal career trajectories with actionable next steps.

TECHNICAL SKILLS

Languages: Python, Java, C, SQL, HTML/CSS, JavaScript

AI/ML Systems: LangChain, OpenAI API, RAG architecture, embeddings, sentence-transformers, semantic search, fuzzy matching (RapidFuzz)

Backend & Data: ETL pipelines, batch processing, RESTful APIs, data normalization, structured data modeling, JSON schema design

Web & Visualization: React, Express, Next.js, Vite, Streamlit, Plotly, choropleth mapping, i18next

Desktop & Packaging: Tkinter, PyInstaller, macOS app bundling, auto-update systems

Databases & Infra: MongoDB, Redis, AWS, Docker, Vercel, Puppeteer

Tools & Practices: Git/GitHub, CI/CD, Agile SDLC, Pandas, third-party API integration

ADDITIONAL

Visual and audio artist with a strong interest in system design, user experience, and interface clarity.

Pledge Class President, Zeta Beta Tau — coordinated peer communication, accountability, and issue resolution.

LANGUAGES

English: Native

Italian: Basic

Ukrainian (Cyrillic): Elementary