

OMAR MADJITOV

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PORTFOLIO: www.omarbuilds.dev

EDUCATION:

Ph.D. Computer Science, *Georgia State University*, GPA 4.0 May 2030

B.S. Computer Science, *Georgia State University*, GPA 3.63 December 2024

TECHNICAL SKILLS:

Cloud & DevOps: AWS, Docker, GitHub, CI/CD, Git, Netlify, Render, Supabase

Programming Languages: Python, Java, JavaScript, TypeScript, SQL, HTML, CSS, Bash/Shell Scripting

Frameworks & Libraries: React.js, Next.js, Node.js, Express.js, Tailwind CSS

Data & ML: Machine Learning, Deep Learning, Statistical Analysis, Feature Engineering, Data Cleaning/Wrangling, Model Evaluation, NLP, NumPy, Pandas, Scikit-learn, PyTorch, TensorFlow, Matplotlib

Databases & Tools: PostgreSQL, MySQL Workbench, MongoDB, Jupyter Notebook, PowerBI

Other: REST APIs, Cloud Deployment, Debugging, Data Privacy & Ethics, Agile Development

EMPLOYMENT:

Georgia State University, Graduate Teaching Fellow — Python August 2024 – Present

- Taught Python fundamentals to students from non-technical backgrounds, emphasizing problem decomposition, debugging, and clean code.
- Designed and graded Python assignments, ensuring alignment with course objectives and measurable learning outcomes.

WellStar HealthCare System, IT Intern August 2023 – August 2024

- Supported clinical and administrative staff with hardware/software troubleshooting, secure device imaging, and standardized deployment in a healthcare environment.
 - Executed operational and security procedures in HIPAA-constrained settings, prioritizing reliability and data integrity.
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PROJECTS

ML Engineer — SEC 10-K Risk Factors NLP + Outcome Labeling Spring 2026

Python, BeautifulSoup, NLP, Time-Series Labeling — SEC EDGAR (data.sec.gov), Alpha Vantage

- Built an end-to-end pipeline to download 10-K filings, extract **Item 1A (Risk Factors)** text, and join each filing to post-filing market outcomes.
- Created a reproducible supervised dataset with one row per filing (CIK, ticker, filing date, accession, risk text), labeled **high-risk** when the stock experienced a $\geq 30\%$ **drawdown within 90 days** after filing (daily adjusted close).
- Produced audit-ready artifacts (deterministic section parsing Item 1A→Item 1B, fixed event window definition) to support downstream modeling and evaluation.

Data Scientist — Geospatial & Transactional Revenue Analytics Fall 2025

GitHub: [geospatial_clustering_seasonal_analysis](#) — Python, SQL, Pandas, GeoPandas, Time-Series Analysis

- Built an end-to-end analytics pipeline converting raw accounting exports into normalized relational tables for ML analysis.
- Recovered customer geolocation with multi-stage resolution, achieving **65% high-confidence coverage**; validated clustering via Hopkins statistic and derived **6 territories** capturing **75% of revenue**.
- Performed seasonal decomposition of invoice frequency vs. value to identify demand cycles and baseline revenue behavior.

Machine Learning Engineer — Brain Tumor Detection (YOLOv8) Fall 2025

GitHub: [UNET-vs-YOLO-Brain-Tumor-Detection-ML](#) — Python, PyTorch, YOLOv8, Data Pipelines

- Diagnosed dataset-label mismatch in a medical imaging task and reframed semantic segmentation into a bounding-box detection problem to preserve correctness.
- Built a reproducible training/inference pipeline (COCO↔YOLO converters, evaluation scripts, visual diagnostics).

- Achieved **mAP@50 = 0.905**, **IoU = 0.73**, and **0.91 pixel accuracy** using YOLOv8 on Apple Silicon (MPS backend).

ML Engineer — Machine Learning From Scratch

Fall 2025

GitHub: machine-learning-clustering — NumPy, Statistical Learning, Optimization

- Implemented KNN, logistic regression, and neural networks from first principles with manual cross-validation and regularization.
- Produced reproducible experiments and evaluation artifacts for direct model comparison and review.

Data Scientist — Housing Price Drivers (Team Lead)

Spring 2025

GitHub: houses-schools-crimes — Python, Scikit-learn, Statistical Modeling

- Led a 6-person team analyzing **30K+ records** across housing, crime, and education datasets to identify price drivers.
- Built and tuned Random Forest, Logistic Regression, and KNN models achieving **95% F1-score** for price-category prediction.

Full Stack Engineer — Job Ledger (Team Lead)

Fall 2025

https://jobledger.app/ — React, Vite, Express, PostgreSQL, JWT

- Designed and built a full-stack job-application tracking platform with user-scoped CRUD, JWT-based authentication, and protected routes.
- Implemented dashboards and external job-feed ingestion to improve tracking consistency and reduce user error.
- Deployed production frontend on Netlify and backend on Render with environment-based configuration and CI-friendly builds.

Full Stack Developer — HandyHub (Q&A Platform)

Summer 2025

holyyhandyhub.netlify.app — React, TypeScript, Supabase, Tailwind

- Built a community-driven Q&A platform with authentication, private routes, voting, and threaded discussions.
- Implemented search, sorting, filtering, and responsive UI patterns to improve navigation across posts and answers.
- Designed relational schema and implemented session persistence for profiles, posts, answers, and votes.

Frontend Engineer — Seven Lines Corporate Website

Fall 2025

7linesinc.com — Next.js, TypeScript, Tailwind CSS

- Developed a responsive corporate website using Next.js App Router with mobile-first layout and optimized asset loading.
- Integrated production email forms, environment-based configs, and static optimization for fast page loads.
- Improved navigation clarity and visual hierarchy to support lead generation and client engagement.