

Zackaria Mamdouh

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EDUCATION

City University of New York - Queens College

May 2024

Bachelor's Degree in Computer Science, Minor in Biology

SKILLS

Languages: C#, Java, Python, TypeScript, JavaScript, SQL, C, C++, HTML/CSS

Frameworks: .NET, ASP.NET Core, Blazor, Entity Framework Core, Spring Boot, React, Next.js, Node.js, FastAPI, Flask

Databases: PostgreSQL, SQL Server, MySQL, MongoDB, Elasticsearch

Cloud & DevOps: AWS, GCP, Azure, Docker, Git, GitHub Actions

Data & Pipelines: Apache Airflow, Apache Beam, pandas

Libraries: Pydantic, MudBlazor, PDFsharp, Recharts, httpx, pytest, JUnit

EXPERIENCE

Millennium Technology Group | *Full Stack Software Developer*

January 2025 – Present

- Modernized a legacy .NET Framework 4.8 application by migrating core functionality to .NET 10. Reworked synchronous database calls using async patterns and caching, reducing query response times from 7 seconds to under 1 second.
- Developed a payment tokenization service that integrates FreedomPay with the company's property management system. Removed raw payment card data from internal hotel workflows and automated a previously manual handoff process.
- Built a .NET 10 Blazor dashboard that monitors end of day processing across Rosen Hotels & Resorts 7 properties. Added reconciliation error tracking and configured Twilio alerts for unresolved after hours outages.
- Developed a .NET service that generates personalized guest stay letters from Word templates and Infor HMS data, eliminating manual entry for approximately 300 documents per month.
- Replaced a legacy Crystal Reports workflow with a reporting application using Blazor, SSRS, Entity Framework Core, and SQL Server. Integrated paginated data from the Infor SCS API, allowing the convention services team to generate date specific flow sheets on demand.

The Child Center of New York | *Programming Instructor*

October 2022 – June 2024

- Developed and taught a Python curriculum to more than 30 middle school students. Covered programming fundamentals, problem solving, and object oriented programming.

PROJECTS

KYB Compliance Engine Pipeline | (Python, Apache Beam, FastAPI, Next.js) [LINK](#) January 2026 – March 2026

- Built a data pipeline that cross references NYC business license data with New York State corporate registrations across 2 million records. Used fuzzy matching to identify potential KYB compliance issues.
- Created a multi stage Apache Beam pipeline with Pydantic validation and paginated Socrata API ingestion using httpx. Stored raw data in Google Cloud Storage and processed results in PostgreSQL with indexes and unique constraints.
- Added anomaly detection rules to flag active licenses connected to dissolved entities, licenses issued before LLC formation, dormant registrations, and address difference between city and state records.

Disney Wait Time Trend Analyzer | (Java 21, Spring Boot, Python, Next.js) [LINK](#)

April 2026 – Present

- Developed a Java 21 Spring Boot API that provides yearly trend analysis, ride level breakdowns, and seasonal averages. Used Spring Data JPA and JPQL aggregate queries to calculate statistics directly in PostgreSQL.
- Built a Python pipeline that collects public Disney World wait time data on a schedule. Added normalization, validation, and bulk upserts with unique constraints to prevent duplicate records.
- Containerized the application with Docker Compose and deployed the API to Azure App Service and the frontend to Azure Storage. Created a GitHub Actions pipeline that runs automated tests on every push and deploys each component.
- Built a Next.js and TypeScript dashboard with Recharts to display crowd trends, ride comparisons, and seasonal patterns.