

Contact

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Top Skills

Redis

Celery

docker

Certifications

Microsoft Certified: Azure AI Fundamentals

IEEE IMSA Publication - Enhancing Garment Sewing Employee Added Value Monitoring using a Video-Based Spatio-Temporal Approach through Computer Vision

Microsoft Certified: Azure Data Fundamentals

IEEE MIUCC Publication - An enhanced Transformer-based Approach with Meta-Ensemble Learning for Arabic Sentiment Analysis

IEEE IMSA Publication - Beyond Touch: A Comparative Study of Gesture and Tangible Interactions for Smart Tables Using Multi-Source Data

Mustafa Marzouk

Muslim | Ex-SWE @ Microdoc | AI Researcher | ECPC Finalist | Django Developer | Math Animation Creator (Manim)
AI Jizah, Egypt

Summary

Full Stack Engineer

I provide freelance services, creating Python animations for math videos in the style of 3Blue1Brown, using Manim library.

Experience

Upwork

Python Developer

February 2023 - Present (2 years 8 months)

United States

- Awarded the "Top Rated" badge on Upwork, recognizing the top 10% of talent.
- Collaborated with clients across Europe and the United States on data visualization and educational animation projects.
- Specialized in creating visualizations using the Python graphics library, Manim, for educational content animation.
- Worked with YouTubers and large organizations such as RareSkills and Wisconsin School of Business.
- Enhanced expertise in Python and computer graphics through diverse and challenging projects.

MicroDoc

Software Engineer

July 2024 - July 2025 (1 year 1 month)

Dublin, County Dublin, Ireland

- Developed and managed full-stack web applications, combining SvelteKit for the frontend and Django for the backend, managing data and audio processing while handling APIs to support multiple concurrent daily users.

- Added Celery, RabbitMQ, Redis, Flower for long running background tasks and ensured persistency and graceful restarts
- Dockerized the backend stack using docker compose accross different ec2 machines (production, staging) and implemented blue green deployment for zero downtime using docker containers and Nginx load balancing
- Built and optimized APIs with Django, implementing features like pagination, complex ORM queries, and smooth database migrations.
- Improved application performance by reducing redundant polling requests by 90% on key pages.
- Integrated Stripe to manage tiered pricing models seamlessly.
- Set up automated end-to-end testing with Playwright, scheduled using shell scripts and cron jobs, and built a Telegram bot to provide hourly test reports.
- Forked an HTML-to-DOCX parser to handle project-specific needs, storing documents and images in an S3 bucket.
- Enhanced dashboards with advanced filtering systems for better user experience and data organization.
- Fixed and monitored issues reported by Sentry, ensuring the app remained stable and reliable even under high usage.
- Built CI pipelines with GitHub Actions to maintain code quality and consistency through automated linting and testing
- Worked closely with clients to address feedback, making improvements and implementing requested changes.
- Reviewed code, managed pull requests, and performed rebases to maintain smooth collaboration within the team.
- Created a C# WPF text-to-speech app integrated with a Django backend and OpenAI API, managing audio processing and storage.

- Designed MVP-architected C# code for scalable desktop applications.

National Telecommunications Regulatory Authority (NTRA) of Egypt Business Intelligence Analyst

July 2023 - August 2023 (2 months)

Giza, Al Jizah, Egypt

- Leveraged PowerBI to extract meaningful insights from real-world data.
- Analyzed market share distribution of major operators (WE, Vodafone, Etisalat, Orange) across Egyptian provinces and cities.
- Explored customer complaints data for the first half of 2023 to identify areas of concern, particularly related to latency.
- Developed an understanding of the philosophy behind extracting valuable insights from data.
- The internship fundamentally changed your perception of data and its potential.
- Gained proficiency in utilizing DAX measures, M-language for data transformations, establishing table relationships, and data cleaning.
- Learned how to create clear and comprehensive dashboards for visual representation of findings.
- Improved communication skills through multiple presentations to managers, conveying complex data in simple terms.
- Gained proficiency in data warehousing techniques, specifically with SQL Server Integration Services (SSIS).
- Developed skills in efficiently combining data from different sources through effective ETL pipelines.

Innovies Club

Frontend Web Developer

April 2023 - August 2023 (5 months)

Cairo, Egypt

- Developed a WordPress website for an Irish car dealership, incorporating

ACF, BeRocket, PHP, and WooCommerce plugins : dublincitymotors.ie

– Designed and developed landing page using astro framework for Rawakz International, a Saudi Arabian company renowned for its diverse construction projects tech.rawakz.com

مركز المعلومات ودعم اتخاذ القرار بمجلس الوزراء - Information and Decision Support Center IDSC

Frontend Web Developer

August 2022 - September 2022 (2 months)

Cairo, Egypt

- Filled the gap between the practical world and the academic world by working with real professional in a working space.

- Helped me create networks with professional, friendly, and helpful mentors.

- Built confidence in communicating with people from different departments.

- Learned new technologies (react, redux, tailwind) and created several projects with them to deepen the understanding of these technologies

Education

University of Greenwich

BSc, Computer Science · (September 2020 - September 2024)

Modern Sciences and Arts University

BSc, Computer Science · (2020 - 2024)

Dar El Tarbiah School IGCSE

IGCSE · (2017 - 2020)