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Elyes Mahjoubi

https://github.com/EM51641
Swiss Citizen

EDUCATION

HEC Lausanne Lausanne, Switzerland
M.Sc. in Quantitative Finance, GPA: 4.95/6.0 *2019 – 2021*

- **Coursework**: Econometrics; Mathematics; Programming (Python, C++); Statistics
- **Master Thesis**: Rough Volatility Modeling in option pricing validated with a grade of 6.0/6.0

HEC Lausanne Lausanne, Switzerland
B.Sc. in Economics, GPA: 4.7/6.0 *2016 – 2019*

- **Coursework**: Econometrics; Mathematics; Programming (Matlab); Statistics

WORK EXPERIENCE

Gartner Barcelona, Spain
Software Engineer *January 2024 –*

- Developed a high-performance API supporting over 100 million users annually across platforms including Capterra, Software Advice, Upcity, and GetApp, implementing the Query Specification pattern to enhance repository flexibility and maintainability while expanding GraphQL schema with new types/resolvers for critical functionalities like segment-based review displays (by category, industry, ...). Designed versatile data models enabling efficient storage across RDBMS (Oracle, PostgreSQL), Elasticsearch, and in-memory systems to optimize performance and scalability
- Streamlined data ingestion processes by implementing Kafka consumers that read from multiple Confluent topics, utilizing Avro for schema-based deserialization.
- Optimized application deployments on AWS EKS clusters using Kubernetes, Helm, and CSI drivers, while using GitHub Actions caching strategies to automate and accelerate CI/CD workflows-achieving a 25% reduction in deployment time.
- Spearheaded development of a global query complexity framework with customizable rulesets, enabling back-end teams to safely test algorithm changes in a pre-rollout validation environment and preventing client-side breaks through proactive failure simulation while accelerating iteration cycles by more than 100% on assessment improvements, as the complexity algorithm was only reviewed a few times a year in the past.

Amazon Iasi, Romania
Software Developer *May 2022 – October 2023*

- Developed a high-performance ECS REST API (Flask) integrated with a Bootstrap 5 GUI to automate ticket-raising rules based on OLAP Redshift Database attributes (e.g., seller and brand IDs). This automation reduced staff requirements by 26%, generating over $1M in monthly savings.
- Architected a REST API and PySimpleGUI interface to streamline invoice filling for sellers, eliminating manual form entry. Leveraged PostgreSQL (v14), NestJS, TypeORM and AWS Lambda for robust back-end functionality, enabling temporary state commits to a local database and efficient form submission to the Amazon vendor microservice. This system saved $500K/month through headcount optimizations.

PERSONAL PROJECTS

- **LiveDisplaced**: This project runs on Quart (async Flask version) and leverage SQLAlchemy as ORM along with several AWS services, allowing us to visualize the influx of refugees, asylum seekers and people of concern around the world to raise public awareness.https://www.livedisplaced.com

LANGUAGES

Native: French, Arabic
Full proficiency: English (IELTS C1)
Partial proficiency: Spanish (B1)

SKILLS

Languages: Python, Elixir, Typescript, Javascript, Java

Technologies: Terraform, Git, Postgres, Mysql, Elasticsearch, AWS(ECS, EKS, Lambda, ECR, IAM, Route 53, ACM, Batch, Cloudfront, Cloudwatch, Aurora, RDS, Secret Manager, ALB, SSM, S3, Fargate), Apache Kafka, Docker, Kubernetes, Gitlab CI, GitHub action, Datadog, Opentelemetry, Confluent