

Elias Owis

Full Stack Software Engineer

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Summary

Software Engineer who is constantly seeking out new challenges and opportunities to solve everyday problems and create innovative solutions that enhance productivity. My motto is "**Your Time is Your Life**", so I always try to invest every moment of my life to level up my skills and mentality.

Skills

- **Languages:** Python, JavaScript, TypeScript, C++, SQL.
- **Frameworks:** Django, Node.js, Bun, Express, Flask, FastAPI, Supabase, Strapi, Next.js, React, Refine, Angular, Electron.js, Ionic, React Native, Odoo.
- **Technologies & Tools:** Nginx, Apache, Web Scraping, REST API, GraphQL, Web Sockets, SEO, Celery.
- **Databases:** PostgreSQL, MySQL, SQLite, MongoDB, SQLServer, Redis.
- **DevOps:** GitLab, Atlassian (JIRA, BitBucket), Docker, CI/CD, Jenkins, Sentry, AWS.
- **AI:** Prompt Engineering, OpenAI API, Gemini API, CrewAI, Codeium Windsurf.

Work Experience

Murquab Investments

04/2024 - Present

Full Stack Software Engineer

- **AI Travel Itinerary Generator:**

Developed an innovative AI-powered travel app that creates detailed travel itineraries based on user prompt. Key features and accomplishments include:

- ❖ AI itinerary generator based on **CrewAI**, that can search the internet and produces structured JSON data, including daily itineraries aligned with user queries, featuring a list of activities for each day, key attractions, cultural insights, travel tips, special events, local customs, daily activities recommendations, hidden gems in the destination, weather forecasts and estimated costs.
- ❖ Achieved a remarkable reduction in itinerary generation time from **3-5 minutes to 1 minute** approximately through advanced prompt engineering and parallel processing techniques.
- ❖ Optimized cost efficiency by decreasing generation expenses from approximately **\$1.00** to under **\$0.20** per itinerary, an **80% reduction**.
- ❖ Implemented intelligent conversation features allowing users to chat with AI about their itinerary and regenerate the whole itinerary based on the discussion or selectively regenerate specific sections/items based on feedback.
- ❖ Engineered a robust system architecture with **Docker, Celery, and Redis/RabbitMQ** for asynchronous task processing, implementing cache management strategies to reduce DB queries and avoid N+1 Query DB issues in addition to cache invalidation strategies for data accuracy.
- ❖ Established comprehensive development workflows for a diverse team of university interns at Murquab Investments' Creative Incubator, implementing **git hooks** (pre-commit, unified code formatting, linting, branch name and commit message RegEx), **Sentry** monitoring with **Slack** integration, and structured **BitBucket** workflows with branch restrictions and merge strategies to ensure code quality and streamline collaboration across the software development team.
- ❖ Created a CI/CD pipeline using **Jenkins** with parameterized workflows for controlled deployment, including stages for testing, quality, security scanning with bandit, and automated health checks.
- ❖ PDF export functionality using **WeasyPrint (html-to-pdf)** for sharing and printing of itineraries.
- ❖ Integrated **OpenStreetMap API** and **Leaflet.js** to visualize daily itinerary activities, displaying interactive routes, and travel distances for enhanced user navigation and trip planning.

- **Importing Attendance Data to Zoho:** Developed an application for automating employee attendance data flow between facial recognition devices and Zoho People. Initially created a Python **Streamlit** solution for CSV file processing and format conversion, then upgraded to a **Flask**-based app with Zoho **OAuth** API integration enabling direct data transfer. Both versions were deployed on the company's internal server, significantly streamlining HR operations and eliminating manual data entry.

▪ **Advanced Data Collection & Analysis System:**

Engineered an AI-powered data extraction ecosystem with Telegram bot interface for collecting and analyzing content from diverse social media and websites. Key technical achievements include:

- ❖ Architected an end-to-end pipeline utilizing **APIFY API** for custom scraping solutions, integrated with **OpenAI** and **CrewAI** for intelligent categorization and summarization of extracted data into structured JSON format.
- ❖ Implemented multimedia analysis capabilities through **OpenAI Vision API** for image interpretation and combined **Vision API** with **Whisper API** for comprehensive video content summarization:
 - Custom **FFMPEG** processing to split videos into frames and audio components.
 - **Cost-optimization** algorithm reducing API expenses by approximately 75% through strategic frame-compilation techniques (converting 100 individual frames into 4 composite 5x5 frame images).
- ❖ Utilized **Celery** and **Redis** to create a queue structure, effectively managing API rate limits.
- ❖ Customized **Django admin interface** with advanced search capabilities, permission controls, and automated error recovery mechanisms by triggering re-scraping and analysis workflows.
- ❖ Deployed the bot on the company local server, utilizing **Ngrok** for secure tunneling and getting public URL for the dashboards and Telegram bot web hook.

▪ **Corporate Websites Development:**

Developed modern, responsive websites for Murquab Investments and their subsidiaries:

- ❖ Murquab website (murquab.com), utilized Next.js, Tailwind CSS, and Framer Motion to create a visually appealing user experience with smooth animations that showcases the company.
- ❖ For Caravel Experiences travel agency website (caravelexp.com), leveraged React, jQuery, GSAP, ScrollSmoother, and Bootstrap to implement smooth-scrolling functionality and engaging animations that highlight travel services and enhance user engagement.
- ❖ Implemented comprehensive technical infrastructure including **VPS** hosting configuration with **Nginx** and **PM2** for process management, **Certbot** for SSL certification, and integrated Google Analytics and Google Tag Manager for data-driven performance monitoring across both platforms.

▪ **IT Processes and Documentation:**

Prepared and implemented comprehensive IT **Standard Operating Procedures (SOPs)** and policies to streamline technical operations across the company and its subsidiaries.

- ❖ Built full IT documentation covering key areas:
 - General Guidelines, System Administration, Backup, Security, Access Control, Hardware Management, Software Control, and Website Policy.
 - Specialized policies for User Accounts, Email & Password Management, IT Support, Incident Management, IT Reporting, and Social Media Management.
- ❖ Managed and organized the company's Hostinger account, including VPS and business hosting plans, and facilitated domain transfers and DNS configurations.

▪ **AI Implementations:**

Created micro-AI tools to automate routine tasks, enhance creativity, and boost employee productivity:

- ❖ OpenAI GPT specifically for the social media team to create connected series of posts rather than isolated posts for campaigns.
- ❖ GPT to assist HR and new interns at the Creative Incubator of Murquab in preparing plans for managing the intern team and organizing their learning outputs.
- ❖ HR tools to transcribe recorded calls and interviews and analyze resumes with AI.

▪ **General IT Tasks and Support:**

Handled diverse IT responsibilities, including laptop and desktop preparation (password recovery, backups, formatting), hardware devices management, setting up Google Business Profiles, assisting HR with Zoho customization, configuring network printers, managing office landline systems with the Grandstream UCM ecosystem, and administering Microsoft 365 services for the corporate group.

Freelance

05/2021 – 01/2022 & 10/2022 – 05/2024

Full Stack Software Engineer

- **Software Projects Analyzing:** Conducted Software Projects Analysis and Consulting for various clients, including a Goods Charging Company, a Multi-Vendor Platform and a Coaching Platform. Tasks encompassed planning, creation of SRS, drawing of UML diagrams, and ERD.
- **Real Estate Management Desktop App:** Utilized Electron.js, Node.js, Express, EJS, and PostgreSQL for a prominent property company in the UAE. The application streamlined accounting processes between the company, marketing agencies, and clients.
- **Auto Parts ERP System:** Successfully customized Odoo for an Auto Parts company in Yemen, streamlining operations across branches and devices. Optimized management of various business aspects, replacing outdated systems and paperwork.

- **BytCryptex:** Engineered a currency exchange platform including an Admin Panel and two Telegram bots—one for customers and one for admins. Leveraging Django and a finite state machine, I customized customer interactions within the system. Through Telegram, users could seamlessly submit currency exchange requests, while notifications with response options were sent to the admin bot, optimizing operational processes and customer interactions. Additionally, I incorporated a referral system to incentivize user adoption. The seamless integration between the customer bot, admin bot, and admin panel streamlined request handling for a currency exchange company operating in the UAE.
- **Video Party Web app:** Developed and implemented using Node.js, Express, EJS, and MongoDB for educational purposes. This project significantly contributed to the academic success of students, resulting in a remarkable 95% success rate in their graduation project.

Genophore (2504 Rutland Place, Thousand Oaks, CA 91362, USA)

10/2021 – 10/2022

Full Stack Web Developer (Bioinformatics)

Key Achievements at Genophore:

- UI/UX of sequence viewers: improved UI/UX of SeqViz DNA, Protein, and TeslaGen alignment sequence viewers, mirroring design aspects of industry leaders like Geneious Prime and SnapGen by 80% by updating forked version of visualization libraries visually and programmatically to use them in Genophore main project.
- Alignment algorithms: Enhanced alignment capabilities by integrating more than 5 algorithms and customizable parameters using BioPython for scientific research.
- Rich-text editor: Created a scientific rich-text editor with Plate, allowing seamless documentation of experiments and notes. Integrated features for easy visualizing of biological entities and inserting special characters, resulting in a 50% boost in interactive engagement.
- In addition to working on multiple components like Sequence Cloning, CutSites and Peptide Cutter.

Tools and Technologies:

- Frameworks: Django, Genophore JQuery-based framework (frontend), React.
- Tools: Docker, GitLab pipelines, Celery, BioPython, Elasticsearch.
- Visualization: Mol*, SeqViz, and TeslaGen/OpenVectorEditor.
- Bioinformatic platforms: RCSB, EBI, and IMGT.

Open-Source Contributions

2023 - present

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- **[CrewAI-Visualizer](#)** 2024 - present
Created and maintain CrewAI-Visualizer, an open-source project simplifying AI agent management and collaboration through an intuitive interface. Built with Next.js, Prisma, and GraphQL, it leverages node-calls-python to execute CrewAI's Python workflows. The project has garnered **300+ GitHub stars**. Currently modernizing the infrastructure by migrating to Supabase, FastAPI, Celery, Redis, and enhancing the Next.js to improve UI/UX, scalability and performance.
 - **[Open_Recall](#)** 2025 – present
Architected Open_Recall, an open-source alternative to Microsoft Windows Recall that captures and analyze PC screen across multiple platforms (Windows, macOS, Linux). This desktop application seamlessly operates in the background to periodically capture screenshots, extract text via OCR, identify active applications, and generate contextual metadata summaries using lightweight transformer models (DeepSeek R1 1.5B and Qwen 2.5 0.5B). Engineered a robust technical architecture including WebSocket-based real-time updates, local database for privacy-focused data storage, and cross-platform active app detection mechanisms. Implemented advanced search capabilities with text, application, timeline, and tag-based filtering, allowing users to instantly retrieve previously viewed information.
 - **[AI Hand-Gesture Virtual Mouse and Keyboard](#)** 12/2024
Developed a computer vision tool using Python, PyAutoGUI, MediaPipe, and OpenCV to replace traditional input devices. The tool enables dual-hand control: right-hand gestures manipulate mouse actions (movement, left and right clicks, drag-and-drop) while the left-hand control a virtual keyboard on the screen to input normal characters, symbols (Shift) and CTRL shortcuts (like copy/paste).
 - **[Productive-Automation](#)** 2023 – present
Established and actively maintain "Productive-Automation", an open-source repository featuring a curated collection of automation scripts to enhance productivity in daily tasks.
 - Contributed to the **[SeqViz](#)** project, improving the tool for users and developers. 2023
 - Educational **[Medium](#)** Articles with GitHub Repositories 2023 – present

Other Projects

- **Odoo AI Live Chat Module:** 2024
Supercharged Odoo with OpenAI or Gemini AI integration for chat and creativity with text and images.
- **Web AR/VR Projects** 2023
Augmented Reality projects like AR portfolio, AR furniture, AR accessories
- **Graduation Project (Sport Social Network) (Grade: 96%)** 2021
Built a social media platform for athletes (with Django, DRF, Socket.IO, GraphQL, Angular, Flutter, Heroku and Cloudinary) to provide sport services like publishing interactive workouts not only normal posts in addition to using NLP and machine learning (Sci-Kit Learn and TF-IDF) to prevent any content not related to sport or health. also merged AI in injury recovery prediction service where athlete enters information about his injury and the platform predict the average days to recover with advice related to his injury.
- **4th-year Project (Virtual Classroom Website) (Grade: 95%)** 2020
Developed a learning management system with MEAN Stack and Socket.IO in addition to academic research about SEO and practical tips to optimize websites on search engines.

Education

AlBaath University 2016 - 2023
B.E. in Software Engineering and Information Systems *Average: 87.37%*

Object Oriented Programming, Databases, Data Structures and Algorithms, Operating Systems, Information Security, Data Mining, Information Retrieval, Web Development, Multimedia, Computer Graphics.

Awards and Certificates

- **Cloud Native Base Camp – DevOps 90 Course** 2024
Completed comprehensive AWS DevOps training course covering essential cloud infrastructure and CI/CD practices, including:
 - AWS core services configuration and management (IAM, EC2, EBS, S3, VPC, Route 53, CloudWatch)
 - Infrastructure automation using CLI and bash scripting
 - Load balancing and auto-scaling implementations (ELB, Auto Scaling Groups)
 - Monitoring and alerts implementation using CloudWatch metrics and SNS notification services
 - Serverless architecture (Lambda, API Gateway, DynamoDB, SNS)
 - Multi-environment CI/CD pipeline development (CodeCommit, CodeDeploy, CodeBuild, CodePipeline).
 - Security best practices and the AWS shared responsibility model
- **ServiceNow IT Leadership Professional Certificate** ([Link](#)) 2024
This comprehensive program equips IT leaders with essential technical skills and expertise in managing projects, processes, and teams. Endorsed by ServiceNow, the course covers IT project and program management, strategic planning, and IT architectures.
- **Odoo Living Legend** 2022
Recognized as an "Odoo Living Legend" by extensively studying official tutorials and acing quizzes.
- **Laptop Maintenance and Network Systems Training Courses** 2017 – 2018
finished a 65-day laptop maintenance and 30-day network systems and surveillance devices training courses, organized by GOPA-DERD in collaboration with UNHCR, along with a 4-day life skills training course coordinated by Tadmor Ltd.

Volunteer Work

- **Odoo Customization lecture** 05/2023
Presented a specialized lecture "Odoo Customization" to master's students at Al-Baath University, Faculty of Information Technology, Department of Software Engineering and Information Systems. Demonstrated the effective use of Odoo's customization tools, enabling students to tailor Odoo applications to meet unique business requirements.