

Work Experience

Software Development Contractor	FrontStory	February 2022 — Present
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- Collaborated with product managers to solely maintain a campaign creation tool integrated with five different demand-side platforms (DSPs)
- Leveraged parallel processing to reduce creatives processing times by 60%, significantly minimizing request timeouts
- Delivered UI/UX improvements to optimize user experience and streamline campaign creation workflows
- Integrated a new DSP API, expanding campaign creation capabilities
- Revamped the user management system, introducing a new user type to better support organizational needs
- Implemented a campaign generation feature enabling analysts to create campaigns more efficiently by generating templates based on previously successful campaigns
- Developed background and cron jobs to automate uploaded creatives housekeeping and reduce manual workloads
- Improved user engagement and targeting on published websites by implementing interactive multimedia integrations, browser extensions, and the latest user identification techniques
- Worked on enhancing content management systems (CMS) and campaign management workflows

Freelance Software Developer	(9 Jobs)	May 2019 — January 2022
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- Earned “Top Rated” status and sustained 100% Job Success and Client Recommendation scores on Upwork
- Implemented a financial analysis system using Google Apps Script API for a large-scale content publisher. Extensively optimized the system to run as quickly as possible under Google Sheets limitations

Education

B.Sc. in Computer Engineering	Cairo University	September 2016 — May 2021
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Projects

- **project rev**: Researched, mapped out, and led a team of four in the architecture and development of a five-module audio-interactive personalizable chatbot. [PyTorch, Hugging Face, Flask, Natural Language Processing (NLP)]
- **Nabd**: Incorporated internationalization, GPS tracking, and designed most user interface (UI) scenes and forms, contributing to the app becoming a \$60,000 government award finalist. [React Native, Redux]
- **kabsa**: Built a compiler using Bison & Flex C++ interfaces that supports 8 language constructs, semantic and syntactic error detection, and generates code for a hypothetical stack-based machine. [C++, Lex, Yacc, Compilers]
- **Othello (Reversi)**: Created a basic Othello game implementation that supports two types of playing agents: a human or a general minimax alpha-beta pruning agent. [Python, Artificial Intelligence (AI)]
- **Battleships Game**: Developed the famous battleships guessing game, specifically the ships-placement mechanism, and simulated scrolling chat using queues data structure and 8086 Assembly graphics mode. [8086 Assembly]
- **32-bit RISC Pipelined Processor**: Implemented a regex-based assembler and modeled the memory stage of a 5-stage 32-bit pipelined processor. [Python, VHDL]
- **Doclense**: Contributed to the development of an OCR web app by implementing a text separation algorithm and creating a classifier model achieving 99% accuracy on a custom dataset. [Python, Image Processing, Neural Networks]
- **E7gzly API**: Created, designed, and documented a RESTful API featuring 17 endpoints for a football matches ticket reservation web app. [Django, Graph Database Systems]
- **Database Tuning**: Reduced query running time by an average of 60% using memory management, index tuning, and query execution plan optimization. [Database Systems, Microsoft SQL Server]

Technical Skills

- **Programming Languages**: JavaScript/TypeScript, Python, C/C++, Java (familiar), SQL
- **Frameworks & Libraries**: React, jQuery, Django, Serverless Stack Toolkit (SST), AWS SDK, AWS CDK
- **Tools & Services**: Git & GitHub, PyCharm, WebStorm, Amazon Web Services, Visual Studio Code