Hamza Saktiwy

EDUCATION

1337 Khouribga   2022 – present
Software Engineering

FST Errachidia   2019 – 2022
Bachelor's degree in Software Engineering

ACTIVITIES

Extracurricular Pursuits

- Explored diverse IT fields through projects on CodinGame, Codeforces, and CTFs. Engaged in freelance work involving Node.js and Puppeteer for browser automation.
- Developed passion for advanced algorithms (Dijkstra's, A*, graphs) and optimization problems (simulated annealing, Monte Carlo, genetic algorithms). Currently implementing NEAT algorithm (Neural Network + Genetic algorithms) in C++.

PROJECTS

Mini-shell   C, build for linux system
42 system project   *2 people work*
- **Skills Acquired:** Implemented UNIX shell (process management, signal handling, file descriptor manipulation), developed robust CLI (command parsing, lexical analysis, error handling), enhanced system interaction (environment variable management, built-in commands, file/directory operations), ensured memory efficiency and POSIX compliance.

Webserver:HTTP1.1   C++, build for linux system
42 network project   *3 people work*
- **Skills Acquired:** Implemented full HTTP server (socket programming, protocol handling, client-server communication), developed robust architecture (request parsing, routing, multi-method support), enhanced performance (non-blocking I/O, persistent connections, CGI integration), ensured HTTP compliance and efficient resource management.

Inception   Docker, NGINX, WordPress, MariaDB, Redis, FTP, Adminer
42 DevOps project   *Individual work*
- **Skills Acquired:** Implemented containerized infrastructure (Docker, docker-compose), configured web services (NGINX, WordPress, PHP-FPM), set up database management (MariaDB, Adminer), developed networking solutions (custom bridge network, port mapping), integrated caching mechanism (Redis), implemented file transfer service (vsftpd), ensured data persistence (Docker volumes), applied security best practices (SSL/TLS, environment variables), and deployed monitoring solutions (Prometheus, Grafana, cAdvisor).

Algorithm Models   C++, for computational optimization
Personal project   *Individual work*
- **Skills Acquired:** Implemented advanced optimization algorithms (genetic algorithms, simulated annealing), developed efficient data structures (graphs, trees), applied theoretical concepts to practical problems, optimized performance for complex computational tasks, demonstrated proficiency in algorithm design and C++ programming.

SKILLS & INTERESTS

Skills: C, C++, Python (Basic), JavaScript, Java (Basic), HTML/CSS, SQL(Basic), Git, Linux, Docker, Web Scraping (Basic), Automation

Interests: DevOps, Web Development, System Programming, Data Structures & Algorithms

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