AMIR SHOKRY

+201125813558 | amirshokryabozaid@gmail.com | linkedin.com/in/ameershokry | github.com/AmirShokry

EDUCATION

Alexandria University — Alexandria, Egypt
M.Sc. in Computer and Systems Engineering — *Feb 2025 – Present*

Alexandria University — Alexandria, Egypt
B.Sc. in Computer and Communications Engineering — *Sep 2017 – Jul 2022*

EXPERIENCE

Teaching Assistant — Feb 2025 – Present
Alexandria University — *Alexandria, Egypt*

– Computer Network Security: Taught cryptographic schemes, digital signatures, protocols, and AI adversarial attacks. Conducted labs on intrusion detection, penetration testing (Burp Suite), and web security (XSS, CSRF).
– Introduction to Programming: Taught Python basics (data types, lists, dictionaries, loops, conditions, flowcharts).

Software Engineer — Dec 2023 – Jul 2025
Medicalchallengearena (Remote) — *New York, USA*

– Developed WebSockets-based multiplayer service for interactive medical student practice.
– Built type-safe backend services using tRPC on Bun and Nitro, reducing data handling errors.
– Optimized databases with PostgreSQL (Drizzle) and ArangoDB, improving matchmaking performance by 25%.
– Implemented WebRTC-based calling/chatting with PeerJs, reducing server load by 10%.
– Developed Nuxt-based frontend, improving SEO performance by 15%.
– Improved leaderboard efficiency using materialized views and cron jobs.
– Restructured architecture into a mono-repo (Turborepo), reducing maintenance overhead.
– Reduced query latency by 35% through Redis caching and Cloudflare CDN.
– Developed AI-enhanced data entry dashboard with virtualized lists, RBAC, and debugging tools.

PROJECTS

Silence Remover — *Java, Spring Boot, Python, Nuxt, ffmpeg, yt-dlp, Whisper, WASM*

– Developed a tool using ffmpeg to remove silent parts from YouTube videos.
– Integrated Whisper's ASR to automatically remove filler words from videos.
– Added multiple features such as frame margin and speed control for both silent and sounded parts.
– Designed a fallback system to use ffmpeg WASM on browser in case of heavy server load.
– Implemented HLS streaming for chunked output delivery, enabling real-time preview before processing completion.
– Enhanced processing speed with multithreading, improving performance by 50%.
– Used server-sent events to keep the users updated of the processing status.

Co-develop — *Typescript, React, MongoDB GraphQL, Socket.io*

– Implemented a web-based platform that enables collaborative coding with code execution.
– Collaborated on an implementation of LSEQ CRDT data-structure, allowing collaborative code editing.
– Implemented the platform with the MERN stack (MongoDB, Express, React, Node.js) along with GraphQL.
– Developed secure remote code execution using virtualized Linux environments, supporting C/C++ and Python.

xTRPC — *Typescript, tRPC, tsmorph, tsup, Github Actions*

– Built a tool to parse TypeScript AST and generate optimized tRPC declarations without sensitive context.
– Integrated the tool's output with GitHub Actions workflow, allowing it to be used in any architecture.

TECHNICAL SKILLS

Languages: Typescript, JavaScript, Java, C++, SQL, PHP.
Frameworks: Spring Boot, Node.js, Bun, Nitro, Laravel, tRPC, Vue, Nuxt, React, Drizzle, Socket.io, PeerJS, Redis.
Databases: PostgreSQL, ArangoDB, MongoDB.
Cloud: Oracle Cloud, Microsoft Azure.
Tools: Git, GitHub Actions, Docker, Turborepo.