

Mahmoud Omiesh

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Education

Tanta University – Faculty of Computer & Information Technology
Bachelor in Computer Science

Expected June 2027
CGPA – 3.80

Experience

Fullstack Developer Intern, Sputnik Academy – Alexandria

Mar 2025 – Aug 2025

- Developed a React based online learning platform by collaborating with 3 people, interacting with a Hono API allowing users to enroll in online courses
- Designed comprehensive shopping cart and checkout system with coupon support and order tracking, utilizing paymob payments, leading to reduced cart abandonment
- Implemented an interactive quiz system with multiple-choice questions, automatic scoring and attempt tracking, enabling real-time assessment of student knowledge
- Integrated Mux video streaming infrastructure, implementing token-based security, progress tracking and automatic navigation to next lesson, improving student engagement
- Delivered a high-converting landing page leading to an increase in new student enrollments

Projects

Inscribe

github.com/MahmoudOmiesh/Inscribe

- Developed a Next.js 15 local-first note-taking app, implementing Dexie for offline storage, leading to instant load times and seamless offline functionality
- Engineered a real-time synchronization system, using tRPC and server-sent events enabling multi-device consistency, real-time updates and online-aware background sync
- Built a rich text editor from scratch, with custom transaction-based state management and 15+ formatting options, giving users granular control over how their note looks
- Implemented advanced editor features including slash commands, emoji picker, floating text toolbar and custom input handling that processes 8+ different input types for optimal user experience
- Integrated Google Gemini to provide inline AI assistance directly within the editor, allowing users to generate and refine content with real-time text streaming

Sorting Visualizer

github.com/MahmoudOmiesh/sorting-visualizer

- Developed a comprehensive C++ sorting algorithm visualizer using Qt 6 framework with real-time animated graphics, implementing 6 different sorting algorithms
- Engineered a multi-threaded application utilizing QThread and signal-slot communication patterns to prevent UI blocking during intensive sorting operations, enabling responsive user interaction
- Designed modular object-oriented architecture separating visualization logic from sorting logic, resulting in maintainable code that supports easy algorithm addition and feature extensions

Skills

Languages: TypeScript, JavaScript, C++, Go, Python, SQL, HTML, CSS

Frontend: React, Next.js, Tailwind, React Query, Radix UI, Shadcn UI, Tanstack Router, React Hook Form

Backend: Node.js, tRPC, Hono, Prisma, Better Auth, Zod

Cloud/Services: AWS S3, Mux Video, Kinde Auth, Paymob Payments, Vercel

Tools: Turborepo, Vite, pnpm, Git, Github, NeoVim, Cursor

Achievements

- Ranked 1st in my college class
- Solved 300+ problems using C++ on various online judges, mainly: codeforces, leetcode
- Ranked 20th In Thanaweya Amma 2023 among ~700,000 students