

# Abdelrahman Elaraby

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## EDUCATION

### Zagazig University

B.Sc. in Computer Science, Faculty of Computers and Informatics – CGPA: 3.94/4.0

- **Ranked 1st** with Academic Excellence Award

Zagazig, Egypt

Oct. 2023 – Jul. 2027

## EXPERIENCE

### Backend Developer Intern

Remote — Jul. 2025 – Oct. 2025 — [Certificate](#)

*Elmakan Systems*

- Contributed to backend development for major English-learning platforms, including Englisher Official and Speakefy, focusing on API design, testing, and database modeling.
- Built and maintained scalable RESTful services using Express.js and MongoDB, including performance optimization, CDN integration, and production deployment pipelines.

## TECHNICAL SKILLS

**Languages:** C++, Java, JavaScript/ES6, Typescript, Node.js, Python, HTML/CSS, SQL

**Frameworks & Tools:** React.js, Express.js, MongoDB, Git, Postman, Swagger

**Concepts:** OOP, Data Structures, Algorithms, Database Design, RESTful APIs, JWT Authentication

## PROJECTS

### Speakefy | *Next.js, Express.js, TypeScript, MongoDB, Stripe*

Jul. 2025 – Nov. 2025 | [Live Demo](#)

- Contributed as backend developer for the first online English language learning platform in the Arab world
- Developed modular Express/TypeScript API to support learner experience with payments, localization, and resilient media delivery
- Integrated Stripe and Paymob billing systems with webhook ingestion and reconciliation jobs for secure transactions
- Handled i18next localization, geo detection, and CDN-backed media uploads to provide a seamless international experience

### Magitsh | *Node.js, CLI, File Systems*

Nov. 2025 | [GitHub](#) | [npm](#)

- Built a fully functional Git implementation from scratch using Node.js, supporting core Git commands including init, add, commit, branch, checkout, merge, diff, and log
- Implemented Git internals such as blobs, trees, and commits using SHA-1 hashing and zlib compression with content-addressed storage
- Designed commit history as a DAG and applied BFS-based algorithms to detect merge bases and enable three-way merge with conflict resolution

### Rochetta | *React.js, Express.js, MongoDB, JWT, Cloudinary*

Aug. 2025 – Sep. 2025 | [GitHub](#)

- Built responsive React.js frontend for online pharmacy with product browsing, cart, search, and authentication
- Developed RESTful API to handle users, products, carts, and orders with role-based access control
- Implemented JWT-based authentication with bcrypt password hashing and rate limiting for enhanced security

### EchoSteps | *Java, Swing, Graphics2D*

May 2025 | [GitHub](#)

- Created 2D game with custom rendering using Graphics2D, manual game loop with Timer, and double buffering
- Implemented ghost AI, coin collection, sound system, and retro UI with smooth animations

### Bash Elbalad | *C++, Linux*

January 2025 | [GitHub](#)

- Developed a custom Linux shell supporting command execution, history tracking, and arrow key navigation
- Implemented core file system commands (cat, touch, rm, mv, cp, ls, mkdir, rmdir) with input/output redirection

## EXTRACURRICULAR

### ICPC Zagazig University Community

*HR Team Lead*

Nov. 2024 – Dec 2025 | [GitHub](#)

- Led 9-member team and developed HR Tracker in Python/Tkinter/SQLite to monitor mentors' performance

### Zag Eng Family

*Technical Support*

Aug. 2025 – Sep. 2025 | [GitHub](#)

- Provided support for Node.js workshop, assisting participants in Express.js and MongoDB