

# ZIAD MAMDOUH MOHAMED EL BAKRY

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## SUMMARY

Motivated Computer Science student with a strong passion for Full Stack Development, Artificial Intelligence, and Machine Learning. Proficient in modern web technologies including React, Next.js, Node.js, and NestJS, with hands-on experience in building dynamic web applications. Experienced in both SQL and NoSQL databases (MySQL, MongoDB), and skilled in backend frameworks like Laravel and PHP. Strong foundation in robotics programming with Arduino, achieving competitive success in line-following robot competitions. Eager to apply technical knowledge to real-world projects and continuously expand expertise in emerging technologies. Strong team player with excellent problem-solving abilities and a commitment to delivering high-quality solutions.

## EDUCATION

### B.Tech in Computer Science

Cairo Higher Institute (CHI) • New Cairo, Cairo, Egypt

2022 – Expected Graduation: 2026

- Specialized in Computer Science with focus on software development and artificial intelligence.
- Strong foundations in programming, algorithms, data structures, and software engineering principles.
- Active participant in university robotics programs and technical workshops.

## EXPERIENCE

### Robotics Team Member

Cairo Higher Institute (CHI) • Cairo, Egypt

University Program

- Participated in specialized university robotics course focused on line-following robot development using Arduino.
- Designed and programmed autonomous robots capable of following black lines using sensor integration.
- Achieved 4th place in university robotics competition, demonstrating strong problem-solving and technical skills.
- Collaborated with team members on robot design, sensor calibration, and algorithm optimization.
- Applied programming concepts in embedded systems and real-time control algorithms.

## PROJECTS

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### OCR (Optical Character Recognition) Project

GitHub: [github.com/Ziad-El-Bakry/OCR\\_Project](https://github.com/Ziad-El-Bakry/OCR_Project)

Developed an OCR application utilizing machine learning and computer vision techniques to extract text from images. Implemented image preprocessing, character segmentation, and text recognition algorithms.

### Node.js MongoDB Registration System (Optimized)

GitHub: [github.com/Ziad-El-Bakry/nodejs\\_mongodb\\_register\\_optimize](https://github.com/Ziad-El-Bakry/nodejs_mongodb_register_optimize)

Built an optimized user registration and authentication system using Node.js and MongoDB. Implemented secure authentication, input validation, and database query optimization for enhanced performance.

### Additional Projects

Multiple web development and software engineering projects currently under development and refinement, showcasing continuous learning and technical growth.

## SKILLS

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### Technical Skills

- Frontend Development: HTML, CSS, JavaScript, React, Next.js
- Backend Development: Node.js, NestJS, PHP, Laravel
- Database Management: MongoDB, MySQL, SQL
- Programming Languages: C++, Python, JavaScript
- Artificial Intelligence & Machine Learning
- Robotics: Arduino Programming, Sensor Integration
- Version Control: Git, GitHub

### Professional Skills

- Leadership & Time Management
- Problem-Solving & Critical Thinking
- Effective Communication & Active Listening
- Professional Interview & Job Application Skills
- Teamwork & Collaboration
- Project Management

## ACHIEVEMENTS & CERTIFICATES

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### 4th Place – University Robotics Competition

Cairo Higher Institute (CHI)

Achieved 4th place in university-level robotics competition for line-following robots, demonstrating strong skills in Arduino programming, sensor integration, and autonomous robot control.

### Full Stack Development Certificate

RaiseUp Academy, 2024

Successfully completed comprehensive Full Stack Development training program, mastering frontend and backend technologies.

### Artificial Intelligence & Machine Learning Certificate

2025

Completed advanced training in AI, Machine Learning, and Deep Learning technologies, gaining practical experience in building intelligent systems.

### Soft Skills Development Certificate

Professional Training Program

Completed comprehensive soft skills training covering leadership and time management, problem-solving techniques, effective communication and active listening, and professional interview preparation skills.

## LANGUAGES

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**Arabic:** Native      **English:** Good (Writing and Speaking)