

# Bassant Maher Ibrahim Sayed

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## SUMMARY

Highly motivated Software Engineer with expertise in backend and full-stack development using Node.js, React.js, and Python (FastAPI). Proficient in building scalable APIs, managing databases (SQL/NoSQL), and integrating AI/IoT solutions. Experienced in machine learning, UI/UX design, and agile development. Seeking a challenging role to leverage my skills in developing innovative, user-focused applications.

## EDUCATION

### Helwan University Faculty of Engineering

*B.Sc. in Computer and Systems (CSE), Cumulative Grade: **Excellent (87.67%)***

Cairo, Egypt

*Aug 2020 – July 2025*

## EXPERIENCE

### Software Engineer

*Cairo, Egypt*

Deal.ai

*March 2024 – May 2024*

- Contributed to customizing a fork of GrapesJS as the CMS for Deal.ai, enhancing content management capabilities.

### Summer Training

*Cairo, Egypt*

Helwan University

*June 2022 – July 2022*

- Completed training in Python and OOP concepts, VHDL, HTML, CSS, JavaScript, and PHP, gaining foundational skills in software development.

### Machine Learning Intern

*Cairo, Egypt*

Microsoft Digital Egypt Pioneers Initiative (DEPI)

*June 2024 – Jan 2025*

- Learned statistics, linear algebra, and data science with Python, focusing on machine learning techniques.
- Explored Azure AI fundamentals, MLOps tools (MLflow, Hugging Face), and built basic GANs.
- Developed skills in NLP with attention models and prompt engineering for AI applications.
- Gained experience in Agile development and Scrum methodologies.

## SKILLS & TECHNOLOGIES

**Technical Skills:** Data Structures and Algorithms, Computer Architecture, Object-Oriented Programming, GitHub, PyQt, C++Qt, Problem Solving, React.js, Node.js, React Native, MongoDB, Mongoose, Sequelize, SQL, Firebase, Machine Learning, UI/UX Design.

**Programming Languages:** C++, Java, C.

**Scripting Languages:** Python, JavaScript, HTML, CSS, TypeScript.

**Frameworks/Libraries:** Node.js (Express.js, Socket.IO), FastAPI, React.js, React Native, Ejs, Mongoose, Sequelize.

**Databases:** MongoDB, MySQL, Firebase Firestore.

**Tools:** Visual Studio, MongoDB Compass, MySQL Workbench, MATLAB, Android Studio, Anaconda, Adobe Photoshop, Adobe Illustrator, Adobe XD, Figma, Postman, Microsoft Azure.

## PROJECTS

### Smart Shopping Cart (SSC) System — Graduation Project

GitHub

- Designed and developed an AI-powered Smart Shopping Cart system with features like personalized recommendations, indoor navigation, real-time cart tracking, and seamless transaction processing.
- Implemented a RESTful API using Node.js and Express.js, integrated with MongoDB for data storage and Socket.IO for real-time cart tracking.
- Engineered indoor navigation using the A\* pathfinding algorithm and geofencing for optimized store navigation.
- Integrated control logic for hardware components (sensors, actuators) to ensure precise cart tracking and obstacle avoidance.
- Developed secure user authentication with JWT and bcrypt, and an admin dashboard for store analytics and inventory management.
- Technologies:** Node.js, Express.js, MongoDB, Socket.IO, JWT, Redis, Stripe, NodeMailer.

### SHAREKNY - Social Networking Platform

GitHub

- Developed a real-time social networking platform enabling users to create, view, edit, and delete posts with a live feed.
- Implemented robust validation and authentication across all features for a secure user experience.
- Technologies:** Node.js, Express.js, MongoDB, Mongoose, JWT, Ejs, Socket.io.

### E-Commerce Backend

GitHub

- Built a comprehensive e-commerce platform with user authentication, product catalog management, shopping cart, order processing, and integrated payment systems.

- **Technologies:** Node.js, Express.js, MongoDB, Mongoose, JWT, Ejs.

### SmartLab

GitHub

- Developed a real-time React admin dashboard for IoT lab inventory control with Firebase Firestore and Auth integration.
- Implemented live inventory monitoring, event logs, chart visualizations, and embedded camera feed with secure admin access.

- **Technologies:** React.js, FastAPI, Firebase, Firebase Authentication, Hugging Face.

### Nexus - Book Reselling Website

GitHub

- Created a book reselling platform with a comprehensive catalog using a books API, supporting cart management and purchases of new or pre-owned books.
- **Technologies:** React.js.

### Hangman Game

GitHub

- Developed a Hangman game with two distinct themes and a user-friendly graphical interface, tracking player progress and providing feedback.
- **Technologies:** Python, PyQt.

## ACTIVITIES

**Graphic Design Head at PIXELS:** Led a team of designers to produce high-quality visual content for engineering events and workshops at Helwan University Faculty of Engineering (Aug 2023 – Aug 2024).

**Media Member at Google Developer Student Club:** Created and edited visual content, including social media posts and event banners, at Helwan University Faculty of Engineering (Jun 2022 – Aug 2023).

**Media Vice Head at Launtech:** Co-managed the media team to deliver promotional materials, event coverage, and branding assets at Helwan University (Dec 2022 – Aug 2023).

**UI/UX Designer at Launtech:** Designed intuitive and user-friendly interfaces for student-led web and mobile applications at Helwan University (Jan 2023 – Aug 2023).

**Media Vice Head at Live in Mars:** Directed visual content creation and team coordination for student-led science and tech initiatives at Helwan University (Jan 2023 – Aug 2023).

## COURSES

### *React Native – Udemy by Maximilian Schwarzmüller*

- Built cross-platform mobile applications using React Native, mastering navigation, native device features, state management, and deployment best practices.

### *NodeJS - The Complete Guide (MVC, REST APIs, GraphQL, Deno) – Udemy by Maximilian Schwarzmüller*

- Mastered Node.js fundamentals, Express.js, RESTful APIs, GraphQL, authentication, file handling, and MVC architecture for backend development.

### *Supervised Machine Learning: Regression and Classification – Coursera by Andrew Ng*

- Learned foundational principles of supervised learning, including linear regression, logistic regression, model evaluation, and overfitting mitigation using regularization.

### *The Web Development Challenger Track – Ministry of Communications and Information Technology (MCIT), Egypt – Udemy*

- Developed responsive websites and implemented client-server interactions using HTML, CSS, JavaScript, and modern web frameworks.

### *Introduction to Web Technologies – ITI Summer*

- Covered web basics, including the structure of web applications, frontend/backend separation, and introductory tools for development and deployment.

### *ReactJs – ITI Summer*

- Built dynamic single-page applications using React.js, focusing on components, hooks, state management, and API integration.

### *HTML, CSS, and JavaScript for Web Developers – Coursera*

- Mastered core web development technologies, including responsive design, DOM manipulation, and interactive feature implementation.