

Heba Rasmy

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EDUCATION

University of Birmingham

2022 – 2025

BSc (Hons) in Computer Science and Artificial Intelligence

Vice Chair of External Communications for the UoBD Association for Computing Machinery (ACM): Coordinated partnerships with external companies for career events and led event campaigns dedicated to university students (35% boost).

Coursework: Data Structures & Algorithms, Human-Computer Interaction, Machine Learning, Security & Networks..

EXPERIENCE

Computer Vision Engineer Intern

May 2025 – Current

BloomingBox

- Built an automated quality control pipeline leveraging computer vision models to automate product quality assurance.
- Deployed YOLOv8 for real-time inspection, increasing validation speed, consistency & human inspection errors by 30%.
- Developed dashboards to monitor detection accuracy and generate insights for iterative model improvements.

Student Trainee

May 2024 – Jul 2024

IBM

- Developed an IoT + Alexa prototype with sensors, real-time data, and NLP to enable voice-driven interaction.
- Completed training in Design Thinking, UI/UX, ideation, storytelling, research, and prototyping methodologies.
- Designed & pitched an interactive product experience demo to IBM consultants to showcase client-focused solutions.
- Leveraged watsonx AI and prompt engineering to optimize a classification model using structured prompt techniques.

Software Developer Intern & Student Ambassador

Aug 2023 – Feb 2024

KLIK

- Built & optimized the user interface to enhance usability for students connecting across global university clubs.
- Designed & launched promotional campaigns, boosting engagement and adoption within university communities.
- Applied Agile & Scrum practices while collaborating with cross-functional teams for rapid app growth.

Digital Marketing Intern

Aug 2023 – Aug 2023

Connect Ads

- Gained hands-on experience in audience targeting, campaign automation, and performance analysis across ad systems.
- Supported ad campaign management on Google, Meta, X, and Spotify using Display & Video 360 and Digital Turbine.

RELATED PROJECTS

Fin-Bot: AI Financial Insights Website | Python, React, Flask, RAG, ChromaDB, LLMs

Dec 2024 – Apr 2025

- Built a full-stack RAG-based platform delivering real-time financial insights with document summaries, semantic search, and multi-model LLM integration (GPT-4o, LLaMA-3, DeepSeek-R1); minimized hallucinations via retrieval pipelines.
- Integrated live fintech news and market widgets (gold & stocks) for region-specific, context-aware analysis.

Halo-Ride: Smart Helmet Interface & Control System | React, Mobile, Sensors

Feb 2025 – Apr 2025

- Engineered a next-gen smart helmet with AR navigation, 360-degree ventilation, real-time alerts, & dual solar power.
- Built a companion app for AR control, audio, ventilation, and ride analytics; informed by user research of 50+ drivers.

BrumBot: AI-Powered UoB Student Platform | Next.js, UI/UX, HCI

Nov 2024 – Jul 2025

- Designed UoB's first AI-driven student platform centralizing events, resources, & academic support into a single assistant.
- Applied HCI principles; led ideation in FigJam; produced wireframes & interactive prototypes in Figma & Adobe XD.

IoT & AI Development: AWS Alexa & IBM watsonx

May 2024 – Jun 2024

- Implemented an IoT pipeline integrating sensor data with AWS services and NLP for enhanced interaction.
- Configured protocol-based data transmission to the cloud and integrated with Alexa.
- Built a news classification tool leveraging prompt engineering on IBM watsonx Gen AI.

VerticAI: Vertical Farming IoT & SWE Project

Sep 2023 – Dec 2023

- Explored Agile & Waterfall in designing an AI-driven vertical farming solution to design system models & requirements.

TECHNICAL SKILLS

Languages & Databases: Java, Python, JavaScript, TypeScript, HTML, CSS, SQL (Postgres, SQLite), MongoDB

Frameworks & Tools: React, Angular, Node.js, Tailwind, Linux, Git, Hugging Face, SpringBoot, Flask, JHipster

Libraries: Pandas, NumPy, NLP, YOLOv8, ChromaDB, Tableau, PyPDF2, PyMongo, REST APIs

CERTIFICATIONS & TRAINING

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|--|-------------------------------------|--|------------------------------|
| • IBM Co-Creator Badge | • IBM Practitioner Badge | • Forensic Cybersecurity Dubai Police Workshop | • Sr. Drone Designer |
| • Google Cloud Architecture: Design, Implement, and Manage | • NVIDIA Deep Learning Fundamentals | • The Birmingham Award | • McKinsey's Forward Program |