Mohammed Ibrahim
Aerial Robotics Engineer

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Profile

A software engineer completing an MSc in Aerial Robotics at the University of Bristol, I bring broad experience across fintech, e-commerce, and robotics. My passion for aerial technology began with my BSc dissertation and has grown through academic work and personal projects. Backed by a solid software-engineering foundation, I enjoy building clean, reliable systems that push the boundaries of disruptive technologies such as uncrewed air vehicles (UAVs) — from open-source drones powered by Pixhawk to enterprise platforms like the DJI M350.

Key achievements include:

- Led development of Shaheen V1, a search-and-rescue UAV that earned a Bronze Medal at the 48th International Exhibition of Inventions, Geneva. (View Medal ⧉).
- Upgraded Shaheen V2 with improved electronics and airframe, securing 2nd place out of 8000+ teams at the Saudi MoI Hackathon and a prize of £10,000. (View Article ⧉).
- Led a team of senior developers to develop new features for a B2B payment platform that handles hundreds of transactions per minute and over 30,000 daily transfers.

Experience

Lead Developer, *Arab National Bank* ⧉   Jan 2024 – Sep 2024
Riyadh, Saudi Arabia

- Led a team of senior developers in building new features for a high-volume B2B payment platform processing hundreds of transactions per minute and averaging 30,000 money transactions daily.
- Introduced continuous delivery practices, shifting the workflow from rigid BRD processes to agile development, resulting in sprint deployment every 2 weeks.
- Led the integration of Finacle 11x with the B2B payment platform, ensuring seamless alignment with core banking systems.
- Collaborated with the SRE team to implement alerting and autoscaling mechanisms, ensuring the platform could handle hundreds of heavy transactions per minute by dynamically scaling across multiple pods.
- Supervised and deployed critical hotfixes to maintain system stability and ensure uninterrupted transaction flow.
- Involved in multiple disaster recovery (DR) activities for the B2B platform and supervised DR efforts across other integration projects to ensure business continuity.
- Collaborated with database administrators to migrate services from OpenShift to a dedicated PostgreSQL cluster, reducing both operational complexity and financial cost for the bank.
- Involved in the technical onboarding of newly joined integration developers, providing guidance on architecture, tooling, and development workflows.

Senior Integration Developer, *Arab National Bank* ⧉   Feb 2023 – Jan 2024
Riyadh, Saudi Arabia

- Contributed to B2B integration to facilitate seamless transactions between business entities.
- Played a key role in developing single and bulk payment solutions.
- Participated in integrating core banking systems, ensuring effective data synchronisation.
- Developed and maintained RESTful APIs using NestJS for secure and scalable financial services integration.
- Supported UAT and production rollouts, ensuring smooth deployment of payment services with minimal downtime.

Senior Developer, *Sure Global Tech* ⧉   Aug 2021 – Jan 2023
- Actively developed and improved multiple production-grade products.   Riyadh, Saudi Arabia
- Rebuilt products from monolithic architectures to microservices architectures, utilising modern technologies.
- Worked across multiple projects and domains, including e-commerce (Jahez ⧉) and projects monitoring and tracking (Government entity).
- Developed backend services for the Blu application ⧉ , the official app of Al Hilal FC.
- Contributed to rebuilding the PIK application ⧉ from scratch.

Full Stack Developer, *Sure Global Tech* ⧉   Dec 2020 – Jul 2021
- Developed full-stack applications leveraging Vue.js, PostgreSQL, and NestJS.   Riyadh, Saudi Arabia
- Researched industry standards for system modernisation.
- Worked closely with product owners and project managers to improve the development process, transitioning from BRD-based planning to agile methodologies.
- Contributed to developing an operations and maintenance platform in collaboration with the operations department.

Software Developer, *Centre of Excellence in Information Assurance* ⧉   Oct 2019 – Oct 2020
- Developed an authentication system using ASP.NET Core and Flutter, similar to Authy and Google Authenticator.   Riyadh, Saudi Arabia
- Built a certificate editor using Fabric.js.
- Designed a structured learning roadmap and mentored several interns.
- Designed and implemented web pages used in phishing simulation campaigns to test and educate end users.

Software Developer Intern, *Centre of Excellence in Information Assurance* ⧉   Jun 2019 – Sep 2019
- Adapted, localised, and documented open-source tools for specific security use cases.   Riyadh, Saudi Arabia
- Assisted as a coach in a full-stack boot camp for two months.
- Executed phishing campaigns for security purposes.
- Created low-fidelity prototypes for an authentication system using Adobe XD to support UI/UX design decisions.

Education

MSc Aerial Robotics, *University of Bristol* ⧉   Sep 2024 – Aug 2025
On track for Distinction
Key modules: Artificial Intelligence for Robotics, Robotics Systems, Advanced Topics in Robotics.
Dissertation: Advanced Radiation Mapping in an Emergency Using Terrain-Following Aerial Robotics

Bachelor's Degree in Computer Science, *Imam Muhammed Ibn Saud University* ⧉   Jun 2014 – Dec 2019
- **Second Class Honours – GPA: 4.58 / 5.0 (equivalent to UK First Class).**
- **Dissertation**: Find missing people in distant areas using thermal drone.

Technical Skills

Python | C++ | Backend Engineering | Node.js | ASP.NET | Arduino | Pixhawk | Git |
Web Development | Kafka | Linux | PostgreSQL | Docker | ROS | Software Architecture & Design