

Md Monirul Islam Mahbub

Engineering, Data & Digital Solutions Architect

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SUMMARY

Engineer and operations leader with 17+ years in industrial and commercial projects: building and facilities development, mechanical fabrication, erection and installation, industrial utilities, BMS and controls, HVAC and fire protection. Eleven years as Managing Director of WiMs Logistics. Now founder of InaZubi, building multi-tenant business software, and studying for an MS in Data Science at Monroe University.

Work mode: Open to remote, on-site and relocation opportunities

EDUCATION

Master of Science in Data Science

Monroe University · New York, USA

In progress

Bachelor of Science in Computer Science and Engineering

Rajshahi Science and Technology University · Bangladesh · Spring 2015 – Summer 2018 · CGPA 3.66/4.00

August 2018

- Final-year thesis on database design and software architecture (CSE 490), Summer 2018, grade A

Diploma in Engineering (Mechanical), 4-year program

Rajshahi Polytechnic Institute · Bangladesh · CGPA 2.73/4.00

August 2008

Secondary School Certificate (Vocational), Civil Construction Technology

Technical Training Centre (TTC), Rajshahi · Bangladesh · GPA 3.68/5.00

June 2004

Relevant coursework (BSc): Algorithms, Artificial Intelligence, Computer Networks, Computer Simulation and Modelling, Data Structures, Database Management Systems, Digital Image Processing, Numerical Methods and Analysis, Probability and Statistics, Software Engineering

RESEARCH EXPERIENCE

Undergraduate Thesis: Database Design and Software Architecture

Undergraduate Thesis (CSE 490) · Rajshahi Science and Technology University · Summer 2018 · Grade A

Completed

Final-year thesis in Computer Science and Engineering on designing databases and structuring software systems. It laid the groundwork for my later database and SaaS architecture work.

Areas: Database Design, Software Architecture

Understanding Loneliness Among International Students

Research Paper · Monroe University · Spring 2026

Completed

Reviews research on why international students feel lonely, how it affects them and what helps, ending with a proposed support framework for first-year students.

Universal Integrated Digital State Architecture — UIDSA

Independent Research · Monroe University

In progress

A technology-neutral reference architecture for digital government. It brings enterprise architecture, interoperability, data governance and AI governance into one model, with people staying in charge of decisions.

Areas: AI Governance, Citizen-Centric Services, Data Governance, Digital Government, Digital Identity, Enterprise Architecture, Human Oversight, Interoperability, Knowledge Architecture, Monitoring, Security

ACADEMIC PROJECTS

BRFSS Health Survey Analysis

R statistics project · Monroe University · R

Completed

Cleaned the 2014 BRFSS health survey, recoding "don't know" and "refused" answers, built a physical-health indicator and produced descriptive statistics for transgender respondents in R. Code will be shared after the semester ends.

Data & VoIP Network Lab

Guided course lab · Cisco Packet Tracer · Cisco Packet Tracer, DHCP, RIPv2, VLANs, VoIP

Completed

Configured a small network with separate data and voice VLANs, router-on-a-stick inter-VLAN routing, DHCP (including option 150 for IP phones), VoIP calling between two phones and RIPv2 routing across three routers. Verified with ping tests and a working phone call.

Healthcare Data Exploratory Analysis

Completed

Python EDA case study · Monroe University · Jupyter, Matplotlib, Pandas, Python, SciPy, Seaborn

Exploratory analysis of 55,000 hospital records in Python. Statistical tests showed every variable was evenly distributed and unrelated, pointing to synthetic data and showing why data should be validated before drawing conclusions.

- Found 4,966 hidden duplicates that matched other rows in everything except age, leaving exactly 50,000 records.
- Those duplicates created a false billing difference ($p = 0.046$) that disappeared once they were removed ($p = 0.15$).
- Conditions, medications, insurers and test results were all evenly spread, with chi-square tests finding no real differences.
- Every stay length from 1 to 30 days was equally common, and age, billing and stay length were unrelated.

Code: github.com/mimahbub/healthcare-data-eda

SunCrest Hotels & Resorts

Completed

Database design case study · Monroe University · ER/EER Modeling, MySQL, Normalization, SQL

A relational database for a 15-property hotel and resort business, covering hotels, rooms, guests, reservations, staff, services, payments and reviews.

- Designed entities, attributes, primary and foreign keys, cardinalities and participation constraints.
- Modeled individual and corporate guests as a specialization with business rules.
- Normalized legacy reservation data through 1NF, 2NF and 3NF.
- Used joins, subqueries, indexes, views, functions, procedures, cursors, exception handling and triggers.

PROFESSIONAL EXPERIENCE

Founder & Product Architect

September 2024 – Present

InaZubi · New Jersey, USA · inazubi.com

Technologies: Django, Multi-Tenant SaaS, Oracle APEX, PostgreSQL, Product Architecture, Python, React

- Designing Digital Company OS, a multi-company operations platform (182-section blueprint, Version 1 scope complete), and the multi-tenant core behind InaZubi's products.
- Building the Travel Agency Management System on Oracle APEX, Oracle Database and PL/SQL for IATA, non-IATA and Hajj and Umrah agencies.
- Running MAA Pharmacy, a live pharmacy website on Django and PostgreSQL, and prototyping the Sports Intelligence Matrix in React.
- Designing Global Workplace, a country-aware marketplace for temporary, shift-based and skilled-trade work.
- Studying for an MS in Data Science at Monroe University alongside product work.

Managing Director & Operations Executive

October 2013 – August 2024

WiMs Logistics · Dhaka, Bangladesh · wims.com.bd

Industries served: Cement, Fertilizer, Oil & gas, Power, Steel, Textile

Industrial & commercial facilities: Commercial engineering, Factories, Industrial projects, Plants, Steel structure buildings, Warehouses

Steel & fabrication: Custom fabrication, Pipe fabrication, Pressure vessels, Process skids, Steel erection, Structural steel, Tanks

Piping & utilities: Compressed air, Cooling water, Nitrogen, Pipelines, Process piping, Steam, Water

Equipment installation: Heavy machinery, Imported equipment, Process equipment

Building services: Electrical, Fire protection, HVAC, Plumbing

Testing & handover: Commissioning, Handover, QA/QC, Testing

- Led industrial and commercial engineering operations, including planning, budgeting, procurement, logistics and project execution.
- Directed multimillion-dollar projects, developing industrial and commercial buildings and facilities from planning and mechanical and electrical works through testing, commissioning and handover.
- Fabricated structural steel, pipework, pressure vessels, tanks, process skids and custom industrial items, and erected steel structures, process equipment and piping.
- Installed industrial utilities for water, steam, compressed air, nitrogen and cooling, and built process and utility pipelines above and below ground.
- Delivered building services, including plumbing, electrical, HVAC and fire protection, with fire safety design and consultancy.
- Coordinated engineers, subcontractors, vendors, technical teams and stakeholders across complex site requirements, leading a team of engineers, designers and site staff.
- Managed procurement and logistics for imported industrial machinery and technical equipment.
- Managed commissioning support, safety, quality, documentation, software-assisted reporting and operational follow-up.

Executive Engineer

May 2009 – September 2013

Felix Controls Limited · Tejgaon, Dhaka, Bangladesh · felixbd.com

Scope: Industrial and commercial projects

Automation & controls: Building automation (BMS), Control systems, Instrumentation, PLC, SCADA, Variable frequency drives

HVAC systems: HVAC controls, HVAC systems

Fire & security: Fire detection, Fire protection, Security systems

Lighting: Home automation, Lighting automation, Lighting control

- Managed industrial and commercial engineering projects, delivering HVAC systems and controls, BMS, PLC and SCADA-based automation, instrumentation, variable frequency drives, fire detection and protection, lighting control and security systems.
- Managed project planning and engineering coordination from site preparation through installation, testing, commissioning, operations and maintenance.
- Coordinated budgeting, cost management, procurement, materials, vendors, project schedules, resources, risks and progress reporting.
- Supervised installation, maintenance, repair, QA/QC, testing, safety, compliance, documentation and technical problem solving.

PRODUCT DEVELOPMENT (INAZUBI)

Digital Company OS

Under development

InaZubi product · Django, HTMX, PostgreSQL, Python

Runs many companies and industries from one paperless codebase. Shared engines handle workflow, approvals, documents and audit; common modules cover finance, HR, sales, procurement and projects; industry packs add the rest. The 182-section blueprint and Version 1 scope are complete.

- Universal core engines for workflow, approvals, documents, numbering, notifications and audit.
- Common modules for finance, HR, sales, procurement, projects, BOQ, inventory and CRM.
- Industry packs for engineering, construction, real estate, trading, healthcare, education and more.
- Fields, forms, workflows, documents and roles configurable per company, with each company's data kept separate.
- Planned as a modular monolith on Django, Django REST Framework and PostgreSQL.

Global Workplace

Under development

InaZubi product · Django, Next.js, PostgreSQL, Python, TypeScript

A country-aware marketplace for temporary, shift-based and skilled-trade work, built around worker profiles and availability.

MAA Pharmacy

Live

InaZubi product · Django, JavaScript, PostgreSQL, Python

Lets patients request refills and transfers, check prescription status and arrange delivery online.

Website: maapharmacyusa.com

Sports Intelligence Matrix (SIM)

Prototype

InaZubi product · Decision Intelligence, Human-in-the-Loop AI, React

Brings performance, injury risk, scouting and finance into one view for sports teams anywhere in the world. AI suggests; staff decide. Built for clubs and academies of any size.

- Role-based views, multi-sport toggles and decision-support dashboards.
- Modules for injury risk, team selection, recruitment and decision tracking.
- Human-in-the-loop by design: AI supports staff decisions rather than replacing them.
- Designed for clubs and academies of any size, worldwide.

Travel Agency Management System

Under development

InaZubi product · Oracle APEX, Oracle Database, PL/SQL

Multi-tenant ERP for travel agencies, including IATA and non-IATA agents and Hajj and Umrah specialists, with CRM, bookings, suppliers, visas and finance in one system.

- A universal party model and flexible service records cover customers, payers, travellers and suppliers across air, hotel, visa, tour and custom services.
- An event-based double-entry accounting engine.
- Subscriptions and permissions with tenant isolation, default-deny security and audit logging.
- Built on Oracle Database, Oracle APEX and PL/SQL.

SKILLS

AI & Research: AI Governance, AI-Assisted Workflows, Human-in-the-Loop AI, Research Documentation

Automation & Controls: BMS, Control Systems, Instrumentation, PLC, SCADA, Variable Frequency Drives

Data & Analytics: Business Intelligence, Dashboards, Data Analysis, Data Visualization, Jupyter, MySQL, Pandas, Python, R, Reporting, RStudio, SQL

Database & Enterprise Systems: CRM, Database Design, ERP, Oracle APEX, Oracle Database, PL/SQL, Workflow Automation

Engineering & Operations: AutoCAD 2D/3D, Building & Facilities Development, Erection & Installation, Fire Protection, HVAC, Industrial Utilities, Installation & Commissioning, Mechanical & Electrical Coordination, Mechanical Fabrication, MEP, Operations & Maintenance, Pipe Fabrication, Pipeline Works, Plumbing, Pressure Vessels, Process Skids, QA/QC, Site Execution, Steel Structures, Tanks

Networking: Cisco Packet Tracer, DHCP, Inter-VLAN Routing, RIPv2, VLANs, VoIP

Project & Business Management: Budget Planning, Operations Leadership, Procurement, Project Management, Resource Planning, Risk Management, Vendor Coordination

SaaS & Digital Applications: Business Websites, Multi-Tenant Systems, Permission Models, SaaS Architecture, Web Applications, WordPress Development

CERTIFICATIONS AND LANGUAGES

- Business Consulting, US Institute of Diplomacy and Human Rights (2022)
- Industrial Machine Operation and Maintenance, BITAC (2008)
- Mechanical Machine and Hand Tools, Swiss Foundation / BITAC (2008)

Languages: Bengali (Native), English (Professional Working Proficiency)