

MOHAMMED HASNAIN SHAIKH JAKIR

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Incoming BSc Aerospace Engineering at TU Delft. Ships automation tooling, data pipelines and 3D web software end-to-end; lab experience in fuel chemistry and sensor circuits. Wants to learn rocketry hands-on while contributing software and test-data capability from day one.

EDUCATION

Delft University of Technology — BSc Aerospace Engineering

Sept 2026 – 2029

Three-year programme; admitted, commencing September 2026 · Delft, Netherlands

Delhi Private School, Dubai — Grade 12, CBSE

Graduated Feb 2026

Aggregate 90.6% · Mathematics, Physics, Chemistry, Biology, English

- **SAT 1500** (98th percentile) — 760 Mathematics, 740 Reading & Writing · **IELTS Band 8**
- Scholar Badge for sustained academic excellence, Grades 9–12; Ignited Mind Award; competitor, International Olympiad Foundation — Mathematics, Physics and Chemistry

TECHNICAL PROJECTS

Biofuel Synthesis and Comparative Combustion Analysis

Jun 2025

- Produced biodiesel from waste vegetable oil by base-catalysed *transesterification*, running the full wet-lab process from reaction through separation and washing
- Benchmarked combustion efficiency and emissions against fossil coal under controlled method; drew conclusions on energy-density trade-offs and viability as a substitute fuel

Interactive 3D Launch-Vehicle Portfolio Site — [ADD URL WHEN LIVE]

2026

- Built a scrollytelling site around a **real-time 3D launch vehicle** rendered in the browser with Three.js and React Three Fiber, with scroll position driving camera, staging and reveal sequences through GSAP
- Architected for performance — static Astro shell with a single hydrated React island to isolate the 3D cost — and gated behind an automated Playwright rig checking render output and console cleanliness across breakpoints before every build

Market Signal Scanner — Time-Series Pipeline with Backtesting

2026

- Designed and built a pipeline that ingests time-series price data, applies rule-based signal detection across 4-hour and daily timeframes, and logs candidate signals to a journal
- Validated the strategy by **backtesting against historical data** before live use, then forward-tested through a paper-trading journal to measure real performance against expectation
- Deliberately designed **human-in-the-loop**: the system proposes and records, but never executes autonomously — a safety constraint chosen at the architecture stage

Photoresistor Sensing and Automatic Switching Circuit

May 2025

- Designed, breadboarded and bench-tested a light-dependent-resistor circuit driving an automatic switching output; characterised the trigger threshold and evaluated response consistency, reliability under varying ambient conditions, and practical failure modes

EXPERIENCE

Operations Technology Intern — Instacool Technical Services LLC, Dubai

Jun 2026 – Present

- Built an **automated inspection-reporting pipeline** that compiles photo-documented field inspection records into standardised reports, replacing a manual process used across multiple client sites
- Developed a **two-stage anomaly-detection tool** (deterministic rule filter feeding an AI classifier) to audit completed job records against billed work; the first weekly run flagged **170 of 395 records** as discrepancies for engineer follow-up
- Converted a **219-unit asset survey** from unstructured field notes into a validated dataset with templated capture forms; rebuilt a 393-record scheduling sheet into an automated monthly generator

Freelance Web Developer

2026 – Present

- Designed and shipped **ozonehome.ae**: bilingual English/Arabic site with full right-to-left layout, a multi-step booking flow, a guided diagnostic questionnaire, and messaging-API integration
- Runs the full cycle independently for paying clients — brief, design, build, deploy, support

Tutor & Coordinator — Insilt Educate

Aug 2025 – Present

- Volunteer with an organisation that has tutored **5,000+ students across 10+ schools** internationally; personally taught English to 50+ students, building lesson material and assessments, and contributed to expansion planning into new countries and subjects

SKILLS

Building with AI Tooling — Ships working, deployed software by directing LLM coding agents: scoping the problem, specifying the architecture, reviewing and debugging output, deploying and maintaining. Every software project above was built this way and runs in real use. Comfortable designing multi-stage systems that pair deterministic rules with model-based classification.

Currently Learning — Python fundamentals, self-directed through aerospace problem sets, working towards building unaided; CAD.

Engineering & Analysis — Experimental method and lab technique; sensor-circuit prototyping and bench testing; spreadsheet modelling and data structuring.

Languages & Other — English (C1, IELTS 8), Hindi (native), Urdu (fluent), Arabic (basic). Intramural athletics champion; experienced peer leader and presenter.