Mohamed Zakaria Houara

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Education

University of Surrey: Aerospace Engineering BEng Hons   **2023 - 2027**   Key Modules: Advanced Mathematics for Engineers, fluid mechanics, thermodynamics, electronics, materials and statics, solid mechanics (dynamics, stress analysis, torsion). Deformations and vibrations, Aerodynamics, flight mechanics, numerical methods and applied programming, control, aircraft structures,

College/Sixth Form   **2020 - 2022**
Btec national extended diploma
Subject: Applied Science

Secondary School   **2014 – 2019**
GCSE: **8 GCSEs at grades 9 – 5 including Maths and English literature.**

Skills

- **Programming Languages**: python, C++, MATLAB, RUST
- **Tools & Technologies**: Arduino, MATPLOTLIB, Py-Torch, NumPy
- **Languages: English (Native), French (basics), Arabic (mother tongue) • Certifications: Junior Trader Programme – Technical Analysis Certificate • Software: CAD, fusion360**

Work Experience

Google Student AI hackathon   **06-25 – 06-25**

- **Built an AI-powered system to optimize resource allocation in urban areas using satellite imagery and real-time public data.**

- **Combined computer vision, geospatial analysis, and transformer-based models to detect infrastructure stress and population density.**

- **Collaborated with a cross-functional team from ideation to pitch; placed 2nd overall, receiving special recognition from Google mentors for innovation and real-world impact.**

AI research assistant intern   **05-2025 – 08-2025**

- **Supported experimentation and benchmarking of the MuSTRec model, which combines graph-based and transformer-based techniques for personalized recommendations.**

- **Contributed to model tuning and dataset preparation using Amazon product reviews (text/image embeddings).**

- **Helped in evaluating performance improvements, including user embedding integration and ablation studies.**

CITI, Investment Banking virtual work experience   05-2025

- **Completed Citi's Investment Banking Virtual Experience Program on Forage, gaining hands-on exposure to M&A deal execution from the buyside perspective.**

- **Built a detailed company profile and enterprise valuation for a retail acquisition target using public financial data and market metrics.**

- **Developed a dynamic five-year financial forecast in Excel, applying revenue growth, margin assumptions, and tax modelling to assess target performance.**

- **Synthesized key strategic insights from an investor presentation into a concise internal summary to support senior banker briefings.**

AI Encode Hackathon   04-2025

- **Led a team to 2nd runner-up position** out of 50 teams at the AI Encode Hackathon (April 2025), focusing on sustainable blockchain innovation.

- **Co-developed a Solana-based product** aimed at supporting smart contract developers with streamlined and sustainable tools.

- **Drove product strategy and user validation**, ensuring alignment with developer needs and maximizing user satisfaction through direct feedback and iteration.

Electronics & Amateur Radio Society (EARS), University of Surrey

- **Participated in hands-on electronics projects including traffic light control systems, robot builds, and PCB design and assembly.**

- **Gained experience working with microcontrollers, sensors, and hardware integration tools.**

- **Collaborated with fellow students to prototype, test, and refine embedded systems for real-world applications.**

Co founder & CTO of (ALTITUDEX)   01/2025 –PRESENT

- Our startup is focused on solving a real-world problem: helping chemist shops and hospitals deliver urgent medication directly to people's homes.

- With no fixed roles yet, I've taken the lead on tasks like early testing, researching competitor tech, and documenting ideas so we have a clear direction as we move forward

- Since we're still shaping the product, I've had to pick up new skills quickly — whether it's learning how to evaluate components, refining the user experience, or understanding how to make our solution more efficient

Co founder and product manager of (Rugguard)   **03/2025 – present**

- **Led the product development and strategy for Rugguard, a Chrome extension that identifies potentially dangerous Solana tokens (rug pulls) in real time.**

- **Defined key features, user flow, and messaging by working closely with developers and crypto traders to ensure the tool addressed real user pain points.**

- **Helped design the risk scoring system's criteria based on contract behaviour, wallet distribution, and liquidity status, contributing to early adoption and positive feedback from beta testers.**