

# Hamzeh Abu Qamar

Jeddah, Saudi Arabia | US Citizen | [Portfolio](#)  
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## EDUCATION

**King Abdullah University for Science & Technology (KAUST), Jeddah, KSA** 2025  
*M.Sc. in Technology, Innovation, and Entrepreneurship, GPA: 3.96/4.0*

**United Arab Emirates University (UAEU), Al Ain, UAE** 2024  
*B.Sc. in Electrical Engineering, GPA: 3.99/4.0*

**International School of Choeufat (SABIS), Al Ain, UAE** 2020  
*High School Diploma, Average: 97%*

## ENTREPRENEURSHIP & LEADERSHIP

**Intern, InnoX Academy, Shenzhen, China** June 2025 – Present

- Will incubate AirGo – focus on R&D, product refinement, and sales strategy.
- Will collaborate with global startups, mentors, and innovation labs to advance AirGo's market readiness & align it with regional sustainability goals.

**Founder & Product Lead, AirGo, KAUST, Jeddah, KSA** Jan 2025 – Present

- Co-founded startup to tackle environmental monitoring challenges aligned with Saudi Green Initiative and Vision 2030.
- Led collaboration with KAUST researchers to develop AI-driven policy insights.
- Initiated stakeholder engagement with KAUST startups, Neom, and the National Center for Environmental Compliance (NCEC), receiving strong interest and support.
- Built website & led product & business development sprints to shape the MVP.

**Youth 4 Sustainability, Masdar, Abu Dhabi, UAE** Jan. 2024 – Jan. 2025

- Promoted sustainability & renewable energy solutions through seminars at COP28, SES 2023, GSDC 2023, WEEC, WFES 2024 & 2025 as a delegate
- Discussed sustainability initiatives & incorporation into education with Boris Johnson (former PM, UK), HE Dr Sultan Al Jaber (CEO, ADNOC), HE Bora Muzhaqi (Youth Minister, Albania)

**Founder & CEO, Velocity Academy** Sept. 2020 – Feb. 2023

- Operated Instagram online business with 3000 followers, tutored in math, physics, chem
- Facilitated 20 high school students' admissions into US undergraduate programs
- Collaborated with universities to conduct workshops on innovation & entrepreneurship
- Arranged for students to participate in GSDC, MARSS, IEEE ICM, COP28, 6G Summit

## ACADEMIC EXPERIENCE

**Summer Intern, KAUST, Jeddah, KSA** May 2023 – Sept. 2023

- Worked under Prof. Tareq Al Naffouri at the Information Science Lab (ISL)

- Investigated innovative cuff-less methods to continuously monitor blood pressure
- Tweaked ML model parameters on public datasets: WGAN, DCT, UNet

**Research Assistant, UAEU** **Oct. 2021 – May 2024**

- Awarded IEEE Undergraduate Research Scholarship to pursue graduation project
- Analyzed link between ground stations and CubeSats for LEO constellations
- Created NetSat SpaceSim: link budget analysis calculator – uploaded to Github
- Conducted experiments around an artificial blood vessel to investigate the behavior of blood velocity & pressure in the presence of a clot
- Engineered self-charging system for EVs using electromagnetic coils & solar panels

**Sheikh MBZ Scholarship, New York University, Abu Dhabi, UAE** **Sept. 2022 – Apr. 2023**

- Interviewed H.E. Dr. Sultan Al Jaber – ADNOC CEO & COP28 President
- Refined public speaking, critical thinking, leadership skills
- Traveled to Istanbul to learn about their culture and meet VCs & entrepreneurs

## HACKATHONS & COMPETITIONS

**International Business Plan Competition, UIUC, Austin, Texas, USA** **Jan. 2025**

- Founded startup “TagAlong” – system that uses powerbanks to charge EV semi trucks while on the move
- Performed a detailed revenue model, cost structure, feasibility study

**TecShift Hackathon, Aramco & Lab7, Dhahran, KSA** **Oct. 2024**

- Created detailed solution to KSA’s overreliance on fossil fuels & lack of carbon credit system – value prop., market, customer discovery, revenue model, feasibility study
- Envisioned blockchain platform for carbon credit trading & uses data from transactions to influence govt. policy using AI

**Student Engineering Gathering, Sultan Qaboos University, Muscat, Oman** **Apr. 2024**

- Week-long poster presentation: displayed grad. project to 100+ students & faculty
- Engaged in immersive discussions regarding the future of CubeSats & satellite comm.

**Pioneers 4.0 Hackathon, Lipton Teas & Infusions, Abu Dhabi, UAE** **Mar. 2024**

- 3-day hackathon: understood logistics & challenges Lipton faces in terms of optimization
- Developed model to optimize real-world factory challenge: silos, lines, warehouse

**Hack4Climate, UAE Space Agency, Expo City Dubai, UAE** **Dec. 2023**

- 4-day hackathon: understood different levels & bands of sat. imagery
- Plotted NO<sub>2</sub> conc. & emissions for Dubai: Copernicus Sentinel-5P Level-2 imagery

**University Challenge, PwC, Dubai, UAE** **Dec. 2023**

- Underwent climate fresh challenge – arranging pictures according to specific theme
- Learnt about value & contribution of consulting in sustainability

**Innovation Camp, Lafarge, Dubai, UAE** Dec. 2023

- Developed solutions for construction and demolition waste (CDW) recycling: plant that produces metals, plastics, & raw material for sustainable future in construction

**AI in Finance Hackathon, Dept. of Finance, Dubai, UAE** Nov. 2023

- Developed platform that provides & collects data on microfinancing solutions for locals
- Envisioned AI algorithm for budget allocation – secured 1<sup>st</sup> place & 10,000 AED fund

**Youth Sustainability Hackathon, General Electric, Dubai, UAE** May 2023

- Collaborated with teammates on strategy: solve energy transition challenges in accordance with UAE's Zero Net Emissions by 2050 – secured 3<sup>rd</sup> place
- Devised energy mix plan – added 60GW renewable power to UAE's grid

**Athlete, GCC Universities Competition, Doha, Qatar** Feb 2023

- Represented UAE in 100m Sprint – secured 5<sup>th</sup> place
- 1<sup>st</sup> place in Abu Dhabi Football Competition 2022-24
- Acted as liaison between coaching staff and the 25 members of soccer team

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## PUBLICATIONS

1. M. A. Ahmad, **H. A. Qamar**, K. Mohammed, S. Meetani, and R. Alketbi, "Blood Flow Detection Using Piezoelectric Sensors," *IEEE Sensors Journal* (Impact Factor: 4.325), doi: 10.1109/JSEN.2024.3517166
2. K. Mohammed, **H. A. Qamar**, R. A. Khalil and N. Saeed, "Regional CubeSat Communication and Constellation Design Evaluation," 2023 International Conference on Microelectronics (ICM), Abu Dhabi, United Arab Emirates, 2023, pp. 284-287, doi: 10.1109/ICM60448.2023.10378915.
3. **H. A. Qamar**, K. Mohammed, S. Meetani, R. Alketbi, M. Umar and M. A. Ahmad, "Clot Monitoring Through Electromechanical Analysis," 2023 IEEE 11th International Conference on Systems and Control (ICSC), Sousse, Tunisia, 2023, pp. 953-958, doi: 10.1109/ICSC58660.2023.10449743.
4. **H. A. Qamar**, K. Mohammed, R. A. Khalil and N. Saeed, "SatNet SpaceSim: A Platform for Performance Analysis of Small Satellites Mega-Constellations," 2024 Joint European Conference on Networks and Communications & 6G Summit (EuCNC/6G Summit), Antwerp, Belgium, 2024, pp. 646-651, doi: 10.1109/EuCNC/6GSummit60053.2024.10597066.

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## SKILLS

- Python, C++, SystemVerilog (FPGA), HTML, CSS, JavaScript
- Raspberry Pi, Arduino, ESP32
- Microsoft Excel, Word, PowerPoint
- Public speaking, critical thinking, leadership, project management
- English, Arabic, Chinese (basic)