

Ahmad Abubaker

Palo Alto - California | Ahmad.ab.96@gmail.com | AhmadAb.com

Skills

DFM & Fabrication: Designed for and fabricated using CNC machining, injection molding, casting, welding, sheet metal forming, 3D printing, and laser cutting

CAD & CAM: Created 3D models, assemblies, technical drawings, and CAM in Fusion 360

Simulation: Performed FEA stress and thermal analyses, moldflow simulations, and toolpath simulations to validate designs, predict defects, and ensure manufacturability

Electronics: Designed PCBs, integrated sensors, and prototyped embedded systems

Programming: Developed firmware for microcontrollers and scripts for data visualization and interactive prototypes in Python, C++, Java, and Processing

Design Research & Strategy: Led design processes from stakeholder interviews and systems analysis through synthesis, concept development, and validation

Education

Stanford University

September 2023 - December 2025

MS in Design - Physical Form + Manufacturing

Jordan University of Science and Technology

January 2015 - December 2019

BS in Electrical Engineering - Communications

Experience

Product Realization Lab - Stanford University

Course Assistant

September 2023 - Present

- Coached 50+ students from ideation through successive prototyping and rigorous experimentation with processes and materials.
- Mentored 1,000+ students on a comprehensive range of fabrication workflows including: CNC machining, welding, milling, turning, casting, woodworking, 3D printing, and laser cutting.
- Streamlined designs by performing CAD/CAM reviews and providing expert Design for Manufacturing (DFM) feedback.
- Accelerated research by providing design and fabrication support for complex experiment hardware builds.

Canaan IoT - Coffee Tech Startup

Co-founder and Head of Product

January 2021 - September 2023

- Grew the team by recruiting and onboarding 10+ engineers and developers.
- Led prototype development for the IoT sensor node, overseeing PCB and enclosure design.
- Validated product-market fit by deploying prototypes across 10+ coffee shops and roasteries.
- Ensured user-centric design by interviewing baristas and integrating their workflows and needs into the core product approach.

The International Rescue Committee (IRC)

Design Consultant

June 2021 - June 2023

- Designed, prototyped, and successfully scaled a flagship Early Childhood Development intervention, currently reaching 35,000+ caregivers and 50,000+ children, with an annual projection to reach 150,000+ new children.
- Co-Designed and Deployed Playful Learning Areas in 140+ locations across four complex contexts: Jordan, Syria, Iraq, and Lebanon, including in healthcare clinics' waiting rooms.
- Facilitated critical program success by serving as a key liaison between diverse stakeholders: caregivers, healthcare workers, government officials, and design teams.

Naqsh Science - STEM Education Startup

Founding Director

July 2017 - January 2021

- Founded and scaled a pioneering STEM education startup, recruiting and training 35+ STEM majors to produce original Arabic-language science content and live shows.
- Secured critical funding and partnerships by leading fundraising, grant writing, outreach, and communications efforts for the organization.