

Jackson Yuen

English (Fluent) • Italian (Fluent) • Arabic (Proficient)

Professional Summary

Hands-on maker, fabricator, sculptor, and educator with 8+ years of experience designing, equipping, and managing world-class MakerSpace facilities across three continents. Proven ability to train and mentor students in advanced fabrication, CNC, 3D printing, laser cutting, metal fabrication, and robotics in tri-lingual capacity — bridging deep technical expertise with collaborative, community-centered teaching.

Technical Skills

CAD / CAM / CNC: Fusion 360, AutoCAD, MeshMixer, Inkscape, RDWorks, LightBurn — 3-axis CNC routing & milling, CAM programming, toolpath optimization

Digital Fabrication: FDM & resin 3D printing, CO₂ & diode laser cutting/engraving, 3D IR laser scanning for preservation and production

Metal Fabrication: Flux Core Arc Welding, TIG Welding (steel & stainless), MIG Welding (aluminum), Stick Welding, plasma cutting, tube rolling — colossal-scale sculpture production

Electronics & Robotics: Arduino, PCB design & repair, microcontroller integration, actuators (servos, steppers), sensor arrays, single-phase electrical service, Solar PV sizing

Mechanical / Technical: Hydraulic system repair & cylinder rebuild, engine head rebuild, transmission diagnosis & rebuild, key cutting & programming, HVAC refrigerant charging & evacuation (R-410A, R-134A), vacuum pump operation, purging procedures to minimize contamination — fabrication and maintenance of heavy equipment

Programming: C, Python, Java — ML & robotics projects, AI-assisted application development

Safety & Compliance: Machine shop safety officer experience; familiar with OSHA shop-safety standards, equipment lockout/tagout, PPE protocols, hazardous materials handling

Project & Lab Management: Procurement, inventory management, budgeting, workflow design, volunteer & staff training, bi-lingual coordination (English/Arabic)

Work Experience

MakerSpace Consultant & Facility Designer | *Numou Education Center — AlUla, Saudi Arabia* | 2023–2025

- Designed, sourced, and constructed all materials and equipment for the conversion of a gymnasium into a world-class MakerSpace, establishing equipment protocols, safety standards, and user training programs from the ground up.
- Coordinated bi-lingually between the MSX consulting team, Numou leadership, and local vendors to ensure project delivery on time and within spec.
- Worked directly with children and community members, encouraging hands-on creation and fostering engagement with the new MakerSpace facility.
- Organized and hosted weekly Maker Day events, bringing together community members of all skill levels for collaborative making and skill sharing.
- Set up a 3D printer farm, laser cutter stations, and built custom tables fabricated to adapt to the venue's layout and workflow needs.

Co-Founder & Lead Engineer | *MakerSpace Exploration (MSX Boca Chica) — 501(c)(3) Nonprofit* | 2021–Present

- Led engineering and fabrication for major community-art and STEM projects, personally guiding community members through skill development in design, fabrication, and prototyping.
- Developed branding, documentation, and operational workflows for the organization's lab spaces.
- Cultivated a maker community that attracted SpaceX engineers as regular participants, contributing to collaborative builds including a climbing gym, pizza oven, and nosecone sculpture design.
- Organized monthly events bridging SpaceX engineers, local professionals, and the general public to inspire cross-community collaboration and creative making.
- Designed, fabricated, and erected two 30-ft tall aluminum tubular sculptures, running structural simulations for wind load analysis to ensure safety and stability.

CNC Fabrication & Digital Manufacturing Advisor | *Sergio Furnari INC. — USA* | *Recent*

- Advised on 3D printer selection best suited to production requirements; established production workflows and coordinated between the artist and designer throughout the project.
- Assembly and finish work on fabricated components for colossal sculptures; 3D scanned original sculptures using IR laser scanning for archival preservation and production replication.

Technical Crewmember | *Mars Ocean Analogs — USA* | *2024–Present*

- Provided operational and technical support in a research-adjacent analog environment, gaining experience with instrumentation and systems maintenance.
- Performed hands-on mechanical work aboard the vessel: drive belt replacement, sail repair, rigging eye bolts, greasing pulleys, and backwinding the staysail.

MakerSpace Designer & Program Facilitator | *BrightUP — Saudi Arabia* | *2018–2020*

- Designed and built a MakerSpace inside a commercial retail space, developing programs, protocols, and safety procedures from scratch.
- Coordinated with Maker Faire to produce Maker Faire Saudi Arabia, a flagship event supporting the Kingdom's Vision 2030 initiative.

Founder & Director | *SUBOTIX — Saudi Arabia & USA* | *2018–Present*

- Founded and directed an educational STEM product company, developing and marketing a line of kits covering 3D puzzles, introductory robotics, and professional robotics projects.
- Established distribution through Amazon and sold directly to school districts across the USA and Saudi Arabia.

Hackathon Judge — Mechanical Engineering | *King Fahd University of Petroleum & Minerals (KFUPM) — Saudi Arabia* | *2018–2020*

- Invited to evaluate student mechanical engineering projects at two university-level hackathons, assessing technical execution, design thinking, and innovation.

Founder | *Rocketry Club, Wasatch Academy — USA* | *2016*

- Founded the school's first MakerSpace and Rocketry Club; advised equipment procurement and established the initial safety and operational protocols.

Technical Officer | *Discovery Station Assisi — Italy (NGO)* | *Prior*

- Introduced emerging fabrication and digital technologies to local educators and stakeholders as part of an international NGO initiative.

References

Dale Dougherty — Maker Media / Make Magazine

Alexandre Cassette — Airbus / TATA

Sergio Furnari — Sergio Furnari INC.

Reid Stowe — Mars Ocean Analogs

Collin Cain — Relativity Space / Fmr. SpaceX

(Contact details available upon request)