# ALFRED C. BOWLES

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Nationalities: United Kingdom | Lebanon D.O.B: 19 / 11 / 1995

#### **EXPERIENCE**

## Oct 23' - Present BLACK ENGINEERING

## **Project & Design Manager**

Riyadh, Saudi Arabia Turin, Italy

- Successfully managed the end-to-end project lifecycle for the refurbishment and construction of the largest national Opera house in Riyadh, adeptly implementing plans and tracking systems while actively adjusting strategies as needed for an intensely accelerated project timeline.
- Cultivated and maintained robust relationships with key project contributors, fostering collaboration between architects, engineers, contractors, suppliers and consultants to ensure seamless communication and a timely project delivery.
- Leveraged my skill set in design, design technology, BIM, timber and steel fabrication and construction to identify issues early on, and set clear design requirements and deliverables.
- Effectively managed and negotiated contracts with suppliers, ensuring timely and cost-effective procurement of materials and services
- Oversaw on-site contractor and supplier activities, maintaining alignment among all stakeholders and swiftly resolving ad-hoc design, structural, and fit-out site issues. Implemented proactive measures to address challenges, ensuring seamless progress and adherence to project timelines while upholding quality standards.

#### Oct 22' - Oct 23'

## **XYLOTEK - ADVANCED TIMBER STRUCTURES**

## Computational Designer

London, UK Bristol, UK

- Worked as a computational designer and timber fabrication specialist alongside architects, engineers and designers to lead, design and coordinate complex timber structure projects.
- Developed data-driven workflows for design, connection detailing, digital fabrication and installation for large timber and steel structures including pavilions, staircases, walkways and CLT structures.
- Employed advanced techniques with grasshopper and python to automate workflows, ensuring a rapid project delivery.
- Managed on-site fabrication and assembly workflows, aided by parametrically generated install sequence drawings.

#### July 22' - Aug 22' LA MÁQUINA - NOUMENA

## Computational Designer - 3D Printing Assistant

Barcelona, Spain

- Developed grasshopper scripts to create custom printing strategies for large scale PLA and biopolymer 3D prints using both WASP delta FDM printers and robotic manipulators.
- Aided in printing, debugging and postprocessing & gained valuable knowledge on non-planar 3D printing, color gradients and mechanical connections.

## Mar 18' - Jul 21'

## MAKR SHAKR

## Project Manager - Design Engineer

Turin, Italy (Base) Germany Spain France Miami Las Vegas

## BIONIC BAR - Installations Project Manager

- Tasked to manage all new Robotic Bar installations including those aboard Royal Caribbean's largest cruise ships in the world.
- Coordinated between several large subcontractors, including Kuka Robotics, design firms, and automation companies, as well as the clients in order to execute the planning and realization of the Bionic Bars.
- Managed the worksite installation including all team coordination, logistics, contractor relations and problem solving.
- Managed cost controlling and realized an average of 24% profit at the completion of each project.
- Used AutoCAD, Rhino and SolidWorks to develop the construction drawings and design of specific components for the bar (including the structural base and pneumatic end-effector of the robot).
- Aided in contract negotiations and managed project timeline scheduling.

Turin, Italy (Base) RCC Cruise Ships United States China Japan

#### BIONIC BAR - After Sales & Maintenance Project Manager

- Secured, negotiated and managed robotic bar maintenance and sales contracts worth upwards of 2 Million EUR.
- Traveled on a monthly basis to different parts of the world including, China, Japan, New York, New Zealand, Germany and Spain to manage technician activities and client relations for the Bionic Bar.
- Managed scheduling, logistics, and off-site and on-site repairs of the Bionic Bar by interfacing with local contractors and global clients.

#### Jan 20' - Jul 21'

#### **CARLO RATTI ASSOCIATI**

## Mechanical Designer - R&D Engineer

Turin, Italy (Base) Parma, Italy

- Involved in the design, hands-on construction, material supply and deployment of I.C.U container units in under 4 weeks, which included: metal fabrication, aesthetics, HVAC systems, electrical systems, medical gas piping, installation of machinery and medical equipment and the deployment of the first unit at a pop-up Covid-19 hospital in Turin, Italy.
- Designed a complete BIM model of the I.C.U container on Revit, as well as the 2D As-built drawing set.
- P.M. responsible for design and coordination between contractors, fabricators, architects and clients to design, manufacture and install 4 co-axially mechanized Oak doors for a Villa in Parma, Italy.
- Designed and built several components and peripheral items for the new Robotic Bars such as: cocktail shaker end-effectors, fruit slicers, hydraulic and pneumatic systems as well as a client facing tablet totem.
- Designed and produced an upgraded Robotic Bar concept which emphasised efficiency and fast drink delivery for a large casino chain in the U.S.

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## **EDUCATION**

Oct 21' - Jul 22' Barcelona, Spain

# Institute for Advanced Architecture of Catalonia (IAAC)

Master in Robotics & Advanced Construction

- Aquired invaluable knowledge pertaining to the world of robotic fabrication, robotic operation, parametric design, digital sensing, mixed reality, computer vision, data management and rapid prototyping applied to the AEC sector.
- Used several digital and physical tools to design, create, manufacture and present projects in short timelines.

Sep 12' - Dec 17'
Beirut, Lebanon

American University of Beirut (AUB)

Bachelor of Engineering (BEng.) in Mechanical Engineering

Sep 98' - Jun 1
Beirut, Lebanon

Sep 98' - Jun 12' Adma International School

Scientific Highschool Diploma

(Honor's List 2009-2012)

**SKILLS** 

**DESIGN & MODELING:** Rhino 3D | Grasshopper | Solidworks | AutoCAD | Revit

SOFTWARE & HARDWARE: Python | C++ | C# | Computer Vision (OpenCV) | Photogrammetry | OpenFrameworks |

Illustrator | Arduino | Raspberry Pi | ROS | KUKApro

FABRICATION: 3D Printing | CNC Machining | RhinoCAM | MIG, TIG & Electrode Welding | Proficient

with manual tools

**LANGUAGES** 

ENGLISHARABICITALIANFRENCHSPANISHMother TongueMother TongueFLUENTINTERMEDIATEBEGINNER

## **HONORS & AWARDS**

2020 C.U.R.A. - Connected Unit for Respiratory Ailments | Team Member

WINNER: ARCHITIZER A+ | Architecture + For Good

WINNER: FAST COMPANY | Innovation by Design + Social Good

WINNER: P4G | State-of-the-Art Partnership Awards + Sustainable Development

## **EXTRACURRICULARS, SPORTS & LEADERSHIP**

2012 - 2017 National & Collegiate Rugby

- Became the captain of the AUB Varsity Rugby League program, gaining skills in leadership and teamwork.
- Represented Lebanon in International fixtures against Serbia and Italy.
- Awarded the MVP award for leading the team to a national victory for the first time in 13 years.

2013 - 2017 Private Tutoring in Mathematics

• Tutored A.U.B students in mathematics courses ranging from Calculus to Higher-order differential equations classes.

Other Activities

• Skiing, Football, Rockclimbing and Volleyball.

#### **REFERENCES**

Vittorio Cravino
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