**Mohsin**

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# An ambitious mechanical engineering graduate. Looking to learn from experienced professionals and experts in the industry, also interested in data science and analysis.

**Academic History**

**Bachelor of Engineering (Honours) in Mechanical Engineering,**2:1 (Upper-Division)

Heriot Watt University, Edinburgh, U. K.

2014-2018

**Academic Projects:**

*Fuel Cell Management 2018, Individual Project*

* Manage PEM hydrogen fuel cell operating temperatures at below zero ambient temperatures.
* COMSOL software simulated 2D model, optimise cell materials for temperatures below -20°C.
* Insulate using phase-change materials, fiberglass polystyrene
* 60min Time-dependent simulation.
* Prolong vehicle parking times before cell reaches ambient temperature.
* Mix different insulators with optimized thickness; economical, light and does not affect overall size of cell.
* Insulators with phase change materials are the most beneficial, but costly.

*Mitigating CO gas emissions from commercial Gas fryers. 2018, Group Project.*

* Commercial gas fryer efficiency is increased by raising the burner closer to the pan,
* Excess CO emissions must be kept under legislative environmental limit.
* Leading group in; analysing and compiling all possible options to mitigate CO emissions.
* Pitching idea of implementing catalytic converters in flue gas chamber to reduce the excess CO levels.
* Idea meets approval from supervisors.
* Economic design analysis and research of catalytic converters
* Empirical analysis of CO gas emissions.
* Communicating with clients (emails, calls and face to face), delivery, material selection and design validation.
* Design Process presentation and surgery – Advance Product Development Lifecycle.
* Conducting experimental tests, logging and evaluating data received.

*Design and Manufacture a Robotic Arm 2017, Group project*

* Design and Manufacture a Robotic arm that can carry 10 N force.
* Material and joints selection – wood body and steel joints screws.
* Material stress and force analysis, applying material science knowledge.
* Use C++ code for force and torque analysis and weight distribution.
* Use of machining tools (drills, lathe, grip, screws and pins) for manufacturing.
* Arm was able to sustain 10N force at certain angles.
* Base would require more bolts to rotate while carrying 10N force at 360ͦ.

*Aluminum Recycling Business Group Project 2017, Group project*

* Recycling used aluminum waste and sell back for commercial use
* Lead researcher in the sustainability of recycled aluminum lifecycle
* Implemented idea of wet scrubbers and filters
* Trap harmful gases released from heating and recasting aluminum.
* Makes recycling process eco-friendly.
* Great benefits to the environment and manufacturing industry.
* Allowing for foreign markets to deliver aluminum materials.
* Promise to receive a fully functional recycled product at the end.

**High-School Education**

*Wesgreen International Grammar School, Sharjah, UAE 2009-2012*

**Cambridge Assessment International Education:**

3 A-levels: Physics, Chemistry Mathematics

10 GCSEs: 2A\*s, 4As, 4Bs (A\* in Physics, As in IT, Chemistry, English as a First Language.

**Work Experience**

**Larsen & Toubro LTD (Sharjah, U.A.E.). July 2013**

Engineering Intern Design Department

* Design project analysis; electrical substations for national grid power supply, piping system, transformers and power management.
* Assistant analyst on sub-station design drawings.
* Assistant organizer of team meetings, project conferences and work load sharing.
* Substation on site management; battery handling, power line management, transformer maintenance.
* Assistant intern during project initialisation from clients.
* Meeting weekly deadlines and client negotiations in; budget handling, design constraints and management of project.
* Materiel selection team. Negotiating with different companies for materials used.

**Mashreq Bank (Sales department, Sharjah, U.A.E.)**

Sales Intern July 2012

* Assistant in sales consultancy and customer negotiation.
* Customer account document handling
* Cash/credit transactions.
* Assistant intern in HR Management, employee rights.
* Assistant managerial work:
* Customer calls, customer care, ATMs and account management.
* Participated in team building exercises and assessments.
* Assistant in creating new customer sales and credit accounts.
* Overlooked customer records, follow-up on customer requirements and satisfaction.
* Achieving set assistant sales goals; sales pitches, insurance pitches.

**Personal Skills**

* IT skills;
	+ MS Office - experienced
	+ MATLAB - moderate
	+ ABAQUS - moderate
	+ Creo/AutoCAD - moderate
	+ ANSYS - experienced
	+ Visual Basic/ C++ - moderate
	+ Python – beginner
* Have an Automatic Driver’s Licence 2+ years (Needs renewal, Visa Status; Visit).
* Highly eager and flexible to learn and adapt to latest software or changes relating to the field of work.
* Highly motivated and capable of working in pressure situations; individually or within team.
* Willing to re-locate and work anywhere.
* Communication and Leadership skills; high school fairs, and University Group projects.
* Prioritise: hard work, meeting deadlines, project co-ordination, punctuality and professionalism greatly.
* Languages:
	+ English - Fluent
	+ Urdu - mother tongue
	+ Arabic - read, write, speaking - beginner
	+ German - beginner.

**Interests and Achievements**

* Completed Duke of Edinburgh Bronze Award, involving camping expedition:
* Teamwork and organisation
* self-confidence
* patience rigorously tested
* flexibility within work load
* Punctuality
* Volunteering work includes:
	+ Red-cross charity
	+ Volunteering environmental work: charity runs (Al-Qasbah health centre, Sharjah UAE).
* Learning new skills; Programming, online courses:
	+ **IBM Data Science Professional Certificate**
	+ Online 3D joints engineering course was studied and achieved.
* Participated in High school science and Business fairs and debates.
* Enjoy watching Cricket, MMA, Football, maintaining a pro-active and healthy lifestyle.
* Enjoy listening to educational podcasts, reading books, novels, and keeping up to date with world news, engineering related articles that are relevant to the present day and the future of engineering and technology.
* Keen traveller. Visited several countries in the Middle East, Southeast Asia, Europe and North America.
* Always eager to learn a new language (currently learning German), or new skills: including engineering software, or programming languages; C++ and Python (currently learning).
* Particularly enjoy presentations, participating in debates involving any field of work in engineering, business, history or in general.
* IMechE – Accredited Member.