

# EBRAHIM ABDO GABER

Chemical Engineer | R&D Specialist | Data Analyst

Phone: +966 533 174 895

Email: ea.gaber10@gmail.com

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## PROFESSIONAL SUMMARY

Analytical and innovative Chemical Engineer with a CGPA of 3.52/4.00 and hands-on experience in green hydrogen production, process design, and machine learning. Proficient in process simulation (Aspen HYSYS/Plus), data analytics (Python, SQL, Minitab), and experimental design. Experienced in equipment sizing, process safety, and carbon capture technologies. Demonstrated leadership in academic research and student organizations. Seeking roles in R&D, academia, or data analytics to contribute to sustainable chemical solutions.

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## WORK EXPERIENCE

**Assistant Chemical Engineer (R&D), Chemical Reaction Engineering Group (CREG) – UTM** Mar 2023 – Feb 2024 | Johor Bahru, Malaysia

- Designed and executed experiments for biomass gasification to produce hydrogen.
- Conducted gas analysis using GC and statistical analysis using RSM in Minitab.
- Documented findings and presented research to academic supervisors.

**Green Hydrogen Chemical Engineer (R&D), RANDUUK MASTER** Jun 2022 – Oct 2022 | Johor Bahru, Malaysia

- Selected optimal biomass-to-hydrogen production method.
- Prepared experimental setups including autoclave reactor and catalyst tools.
- Developed experiment tables and analyzed results using GC.

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## CORE COMPETENCIES

- **Process Engineering:** Process Simulation (Aspen HYSYS/Plus), Equipment Sizing & Costing, Mass & Energy Balances, Process Optimization, P&ID, Distillation Column Design
- **Green Technologies & R&D:** Green Hydrogen, Biomass Conversion, Hydrothermal Gasification, Carbon Capture & Utilization, Catalyst Testing, DOE, RSM
- **Data Science & Analytics:** Python, SQL, Minitab, MATLAB, Excel (Advanced), Predictive Modeling, Machine Learning
- **Safety & Environment:** HAZOP, Process Safety, Environmental Impact Assessment (EIA), Wastewater Treatment, Waste Management
- **Technical Tools:** Aspen HYSYS, Aspen Plus, Minitab, Python, MATLAB, SQL, Excel, Microsoft Office, HTML/CSS, Figma, Adobe Illustrator

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## CERTIFICATIONS

- DeepLearning.AI Data Analytics Specialization - DeepLearning.ai (Coursera)
- Machine Learning Specialization – DeepLearning.ai (Coursera)
- Chemical Hazards and Process Safety Specialization – UC Davis (Coursera)
- Response Surfaces, Mixtures & Model Building – Arizona State University (Coursera)
- Data Analysis Using Microsoft Excel – Coursera
- Work Smarter with Microsoft Excel – Microsoft
- Aspen HYSYS User Certificate – AspenTech
- Introduction to Programming with MATLAB – Vanderbilt University
- UX Design (Google): Foundations, Wireframes, Research

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## EDUCATION

**Bachelor of Engineering (Hons) in Chemical Engineering**

**FEP 2020 - Mar 2024**

Universiti Teknologi Malaysia (UTM)

Graduated: March 2024 | CGPA: 3.52 / 4.00

Relevant Courses: Process Design, Thermodynamics, Heat & Mass Transfer, Process Control, Reaction Engineering

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## ACADEMIC PROJECTS

**Hydrothermal gasification of EFB under reduced temperature**

- employed all my knowledge area to produce green hydrogen from biomass in temperature range of 150-200 deg C. as my final year project.

**Carbon Capture and Utilization Plant Design**

- Designed process with energy integration and P&ID using Aspen HYSYS.

**Effluent Treatment System – Rubber Gloves Manufacturing Plant**

- Proposed and simulated a treatment system based on effluent analysis.

**Environmental Impact Assessment (EIA)**

- Prepared an EIA report per Malaysian DOE guidelines for RRSD & R2E-WS complex.

**Phytochemical Downstream Process Design**

- Led P&ID development for downstream operations (filtration, preservation).

**Distillation Column Design**

- Applied shortcut method to design multi-component distillation column.

**Soybean Waste Management Study**

- Wrote a comprehensive review on industrial applications of soybean waste.

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## LEADERSHIP & VOLUNTEERING

**Head YSAG Chemical Engineering UTM | Mar 2022 – Mar 2023**

- Organized academic workshops and set up a physical book library.
- Hosted an information session with Erasmus scholarship holders.

**Head, Cultural Committee – ISS-Yemen Mar 2023 – Dec 2024**

- Led public events promoting cultural exchange including debates and competitions.

**Tutor, YSAG Chemical Engineering Mar 2021 – Jul 2021**

- Created tutorial videos and shared academic resources with new students.

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## LANGUAGE

Arabic (Native)

English (C2 – Proficient)

, Russian (A1 – Basic)