Ali Mirzaei

Mirzaei99a@gmail.com | *(604) 720-5211* | LinkedIn | **MEng, EIT with EGBC**

PROFESSIONAL SUMMARY

A motivated Mechanical Engineer with experience in construction project coordination. Proficient in project planning, scheduling, budgeting, and RFIs. Experienced in coordinating mechanical trades and utilizing software tools such as Bluebeam, Procore, and MS Project. Strong technical skills in HVAC, FEA, and mechanical design.

PROFESSIONAL EXPERIENCES

Construction Project Coordinator, VPAC Construction Group Ltd *Mar.2023 - May.2024*

- **BQE Water office tenant improvement** (1 M CAD, 10,000 Sf TI). *Jan.2024 - Mar.2024*
  - Utilized Bluebeam software for reviewing and marking up mechanical, ID, and electrical drawings.
  - Coordinated mechanical trades including HVAC and plumbing to ensure integration with schedule.
  - Managing the close out documents, procurement, change orders, submittals, and RFIs.
- **British Colombia Security Commission** (4 M CAD, 45,000 Sf TI). *Oct.2023 - May.2024*
  - Handling 4 phases of the project with rotation of furniture on the floors for each phase.
  - Assist in the development and implementation of project plans, schedules, and budgets.
  - Coordinated HVAC and plumbing systems installation and maintenance throughout the project phases.
- **Coquitlam College Broadway tech center** (18 M CAD, 60,000 Sf TI). *Jul.2023 - Jan.2024*
  - Reviewed mechanical drawings and coordinated with mechanical trades to ensure proper installation of HVAC and plumbing systems.
  - Working with SmartSheet and Procore to organize, Procurement, change orders, and Submittals.
  - Successfully opening the college in January was a significant milestone achieved.
- **Heritage Office Furnishing Warehouse** (1 M CAD, 2,000 Sf TI). *May.2023 - Sep.2023*
  - Field coordination and handling the incident happens during my watch.
  - Delivering the project on schedule guiding the trades following the drawings.

Junior Mechanical Engineer, Internship, Aban-Sanat-Kara company *Apr. 2020 - Jul. 2020*

- Designed the hydrodynamic part of a small dam project.
- Prepared reports: the environmental effects of the construction of the dam.
- Developed optimization program on MATLAB, Comsol (FEA), and Excel for environmental pollutions.

Filed Engineer, Internship, Radsarma refrigeration company *Oct. 2019 - Feb. 2020*

- Perform engineering calculations of a condenser maintenance using ISO quality system.
- Worked on office engineering duties include material takeoffs, drafting, data gathering, and cost reporting.
- Prepared safety reports for the installation team.

EDUCATION

University of British Columbia, Vancouver, BC, Canada Jan. 2022 - Jan. 2023

MEng. Mechanical Engineering (GPA 88/100)

- **Laboratory Project:** Experimented on the magneto-rheological behavior of Cellulose Nano Crystals to find a material suitable for targeted drug delivery. Utilized Excel, C++, and MATLAB for data analysis.
- **HVAC**: Designed and Calculated the heating, ventilation and cooling load of whole building with RTS method using Excel and picked the required HVAC system equipment.
- **Communication skills**: Obtained highest grade in the class based on strong verbal and written communication.
- **Fuel Cell**: Developed skills to design and simulate different parts of fuel cell system.

Sharif University of Technology, Tehran, Iran Sep. 2017 - Apr. 2021

B.Sc. Mechanical Engineering (GPA: 3.84/4)

- **Laboratory Project:** Designed the micro-pore producing microchip for medical purposes and identifying the cells passing through the micro-pore using pressure differences. Utilized, C++, COMSOL, and CAD for design and data analysis.
- **Water resources**: Worked on locating and simulation a hydrodynamic dam and water resource.
- **Heat transfer:** Calculated convection diffusion and radiant types of heat transfer.
- **Refrigeration systems:** Designed and optimized a household refrigerator.

TECHNICAL SKILLS

- **MS Project:** Created different projects, allocated resources, created timelines, track tasks, and report progress.
- **SOLIDWORKS**: Utilized in various academic and industrial projects
- **C++**: Utilized in the research work to collect and analyze the data and to compare with the experimental data.
- **MATLAB**: Utilized in various projects namely, Organizing Magneto-Rheology data for a course Project- trained a program aiming to find the function describing the sample behavior.
- **EES**: Utilized in the course "Refrigeration systems" to evaluate different refrigeration cycles
- **COMSOL (FEA)**: Used to simulate the concentration distribution over time in a channel to validate the data.
- **AutoCAD**: Utilized in designing micro-chips, CNC, and 3D printing drawings.
- **Procore:** Managed documentation, RFIs, submittals, and collaboration for streamlined project management.
- **Smartsheet**: Organized and tracked project schedules, tasks, and resources efficiently.
- **Microsoft Office:** Created and analyzed project reports, documents, and presentations.
- **BlueBeam:** Reviewed and marked up construction drawings and documents digitally for enhanced collaboration.
- **Adobe**: Designed graphical materials, such as presentations and marketing collateral, to support project.

LANGUAGES

- **English**
- **Farsi**

Awards

- **Ranked 431st** among more than 145000 students in the Nationwide University Entrance Exam. (2017)
- **Silver medal** at the countrywide Physics Olympiad. (2016)
- **Nominated** for Best personal project at SUT for Laminar convection-diffusion equation stimulation (2021)

PUBLICATIONS

- Bahari, A., **Mirzaei, A**. & Taghipoor, M. Cost-effective 3D H-filter fabricated by xurographic method. *Microfluid Nanofluid*, Springer Nature **26**, 70 (2022).

VOLUNTEER AND OTHER PROFESSIONAL SERVICES

Teacher: Allame Helli 10 High School *July.2019 - Sep.2019*

- Physics instructing and mentoring.

Journalist: Cafeastro.net *Jan.2016 - Jan.2017*

- Wrote astronomy articles and took photographs for Café-Astro Virtual Magazine.

References Available Upon Request