Lawrence C. Abu-Hammour

4138 Carpenter Ave. Apt 2B, Bronx, NY, 10466 🏠
(347) 405-4147 📞
lawrenceabuhammour@gmail.com ✉
linkedin.com/in/lawrenceahammour 🔗
Portfolio: http://lawrenceah.me 🌐

To obtain professional experience within the engineering industry. In addition to enhance my skill set and gain valuable knowledge.

Education

APRIL 2021
Bachelor of Engineering/ Cum Laude / SUNY Maritime College, Bronx, NY

Mechanical Engineering, ABET Accredited; GPA: 3.4
Coursework: Machine Learning, Circuit Analysis, Thermodynamics, Dynamics, Materials Science, Engineering Graphics, Introduction to Electric Machinery, Engineering Economics, Fluid Mechanics, Machine Design, Heat Transfer, Computer-Aided Engineering, Applied Electronics, Mechanical Engineering Design, Marine Engineering Design, Vibrations, Transport Processes, Manufacturing Processes, Power Plant Design, Operations Research

2015-2019
Dartmouth College, Hanover, NH

Completed 128 credits as an Engineering Science major with a 3.2 GPA
Coursework: Statics & Solid Mechanics, Control Theory, and Lumped Systems

---

Experience

JAN 2018– MARCH 2018
Research Intern / Integrated Mathematical Oncology at Moffitt Cancer Center

- Built hundreds of mathematical models surrounding chemotherapy, radiation therapy, and virotherapy using MATLAB scripting
- Completed an independent research project centered around optimizing uniform drug delivery and high drug saturation in tumor cells found in Pancreatic Adenocarcinoma (PADC)

AUG 2017 – NOV 2018
Teaching Assistant / Dartmouth Emerging Engineers

- Tutored approximately 10 engineering majors a week in engineering pre-requisites
- Helped with test preparation and offered helpful study skills

JUNE 2017 – NOV 2018
Undergraduate Research Assistant / Wilder Physics Department at Dartmouth College

- Performed data science research on hundreds of visual data sets using MATLAB scripting on medium-frequency burst atmospheric waves under the NASA Space Grant

SEPT 2015– SEPT 2018

Shop Teaching Assistant / Machine Shop at Thayer School of Engineering at Dartmouth College

- Certified to run, teach, and maintain various mechanical machines such as: Laser Cutters, 3D Printers, Vertical and Horizontal Bandsaws, Sanders, Manual Mills, DI WireBender, Thermaforms, Solidworks software, and Manual Lathes

---

Affiliations & Activities

- Hispanic Scholarship Fund Scholar, 2018-2021
- Institute of Electrical and Electronics Engineers (IEEE) Member, 2018- Present
- American Society of Mechanical Engineers (ASME) Member, 2018- Present

---

Skills

Programming Languages (Skill Levels): MATLAB (Expert), C Programming Language (Competent), VHDL (Competent), Python (Some), HTML (Competent), CSS (Competent), Javascript (Some), LaTeX (Expert), SQL (Some), R (Some), Linux, Vivado, LINDO (Operations Research)

Engineering Softwares (Skill Levels): ANSYS (Competent), SolidWorks (Competent), Granta's CESEduPack, GD&T, AutoCAD, Revit, CorelDraw, LogiSim

Microsoft Office, Google Suite, Windows Movie Maker, Adobe Premiere Pro CS6, Lightroom Classic, Audacity, and Salesforce

Languages: Arabic-Modern Standard, Jordanian, Moroccan, Conversational Spanish, Elementary Japanese and Elementary Tagalog

---

Projects

Dual Lift Multi-Arm Spreader (DLMAS)   *September 2020-April 2021*

Engineered a Tandem Spreader attachment that lifts two shipping containers at port terminals as opposed to a single container using hydraulic pistons and metallic arms to support the weight of a second container. The DLMAS' goal is to increase port and terminal efficiency by at least 1.25 times the normal rate of container transportation and increase terminal revenue in the process.

Creation of a 3D Bone Marrow Model to Study Hematopoietic Stem Cell Flow   *November 2020-Present*

Engineered a 3D and 2D simplified bone marrow model in Soldworks and ANSYS to study shear stress and flow through the extracellular matrix of the bone marrow in an attempt to fabricate a device that induces a shear stress to produce platelets and reduce demand for platelet and bone marrow transfusions. Results showed that the device is able to stimulate a shear stress in the bone marrow thus promoting the production of platelets in the body. Completed in association with the New York Blood Center and Cornell NanoScale Science & Technology Facility.

Automatic Error Propagation through Eigenvalue and Eigenvector Calculations   *November 2020-April 2021*

Programmed a dynamic script to calculate the eigenvalues and eigenvectors of any given matrix using the Power Method and the QR Algorithm and performed error arithmetic using class structures to control computational error in an attempt to decrease error in major engineering applications involving the calculation of eigenvalues and eigenvectors.