

Alamara Varughese

Self-motivated college student with strong academic performance and experience in top-tier lab and hospital environments. Demonstrated lab bench, program management, and funds management skill set. Excellent communication and leadership skills. Performs well in a team environment with a creative mindset.

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EDUCATION

University of Michigan, Ann Arbor, MI

Biomedical Engineering Degree - 3.95 GPA
SEPTEMBER 2023 - JUNE 2027 (EXPECTED GRADUATION)

Women in Science and Engineering Residential Program (WISE RP)

American School of Barcelona, Barcelona, Spain

International Baccalaureate Program
SEPTEMBER 2021 - JUNE 2023

Higher Level Biology, Chemistry, and Mathematics.
Member of Yearbook, OneProspr, Chess Club

Northwestern Center for Talent Development, Virtual Course

JUNE 2022 - AUGUST 2022

Asynchronous Physics course to supplement IB Curriculum

EXPERIENCE

Perot Jain TechLab HealthTech, UofM and Life Magnetics — Student Innovator

JANUARY 2025 - DECEMBER 2025 (year-long program)

- Developing technical and industry-specific skills to address real-world healthcare challenges. Collaborating with Life Magnetics to conduct market and clinical research for a transfection kit used in drug discovery, focusing on practical applications in life science labs. 8+ hours a week
- Gaining insights into entrepreneurship and health tech advancements through mentorship with leading startups and Michigan Medicine clinicians.

Engineering Student Government, UofM — Senator

NOVEMBER 2024 - Current

- Elected representative for the College of Engineering, advocating for the interests and concerns of students within the college.
- Attend weekly senate meetings to discuss and vote on matters affecting the university's student body, ensuring that the engineering community's voice is heard at all levels of decision-making.

Blue Design, UM Medicine — Engineering Design Consultant

OCTOBER 2024 - Current

- Collaborating with multidisciplinary teams comprised of med students and undergrads to develop

SKILLS

Emergency First Responder with Basic Life Support, Emergency Oxygen, Asthma and Epi, 2024

Red Cross: Bloodborne Pathogens Training, 2024

Quantitative Analysis, Scientific Writing, Academic Research

Microsoft PowerPoint, Excel, Word, C++, Python, MatLab

AWARDS

Dean's Honor List (UofM), 3 Semesters

President's Award for Educational Excellence

National Scholastic Silver Key: Drawing, 2019

Principal's List (American School of Barcelona), 2022

Honor Roll (American School of Barcelona), 2021

LANGUAGES

English: Native Language, Working Fluency

Spanish: Proficient, Lived abroad in Spanish-speaking country for 2.5 years.

healthcare innovations that integrate engineering and medical insights

- Providing engineering consulting services to Michigan Medicine researchers and innovators, focusing on low-cost, accessible solutions such as 3D modeling and formal prototyping.

R&D in Pharmaceutical Industry Internship, Ammirall — Intern

MAY 2024 - AUGUST 2024

- Designed, performed, and analyzed experiment on immunological pathways to present to senior supervisors.
- Investigated different drug discovery modalities, specifically targeted protein degradation (PROTACS) and high-throughput screening.
- Characterized cell lines to create a model of inhibition in tissue-resident T-cells to treat vitiligo
- Performed various cellular assay techniques (ELISA, TR-FRET, Flow Cytometry, JESS)

Biomedical Engineering Internship, Institute for Bioengineering of Catalonia — Intern

JUNE 2022 - JULY 2022

- Worked under Nuria Montserrat, Current Minister of Research and Universities for the government of the Generalitat de Catalunya
- Characterized cardiac organoids and cardio spheres to model human disease, specifically diabetes.
- Used confocal microscopy analysis and molecular biology techniques (including RNA extraction, cDNA synthesis, and PCR real-time, among others).

Genetics Lab, Universitat de Barcelona, Institute of Biology — Intern

OCTOBER 2021 - MARCH 2022

- Worked under geneticist Prof. Montserrat Corominas at the Gene Expression Regulation Laboratory
- Cultured cells for use in regulation of gene expression studies while learning proper lab etiquette

Marie Curie Children's Clinical Hospital in Romania, Bucharest, Romania — Shadow

JULY 2022

- Observed surgeries from within the operating room and witnessed standard medical procedures from intake and diagnosis to post-surgical care
- Aided in the removal of a neck catheter and dissected gallbladder upon removal from the body.

Clinica Luna & Regina Maria in Romania, Bucharest, Romania — Shadow/Intern

JULY 2022

- Shadowed Dr. Adina Diaconescu, observing consultations on several high-risk pregnancies
- Assisted during consultations, and helped to write patient information documents in English/Spanish.
- Learned how to administer fetal ultrasounds, interpret and analyze the fetus, and perform routine OB-GYN exams such as pap smears.

Blood Drive, American School of Barcelona — Manager

APRIL 2022 - JUNE 2022

- Worked with Banc de Sang i Teixits, in Spanish/Catalan to organize blood donation of 46 people

OneProspr International, American School of Barcelona — Founder of English Learning Buddies

SEPTEMBER 2021 - MAY 2022

- Initiated and gained approval for an ASB-based tutoring chapter for Indian girls. Recruited 15 tutors for one-on-one reading sessions focusing on pronunciation, fluency, and comprehension.