

Abraham Alkhatib

(787)671-8407 | aaa26@illinois.edu | Chicago, IL 60660 | <https://abrahamalkhatib.com>

EDUCATION

University of Illinois at Urbana-Champaign

Expected 05/2025

GPA: 3.73/4.00

- Bachelor of Science, Bioengineering
- **Minors:** Computer Science, Electrical Engineering
- **Skills:** C/C++, Swift, React, MATLAB, SQL, MongoDB, Neo4j, Python, Java/Kotlin, JavaScript, CAD-Autodesk
- **Awards:** Dean's List, James Scholar Honors student, Outstanding Freshman Exhibit (2nd)

EXPERIENCE

AbbVie

Emerging Technology Analyst

01/2024 – Present

- Conducted organization-wide internal consulting, data analytics, and market research regarding vendor evaluations to help R&D better delineate precision medicine trends.
- Worked 1-on-1 with AbbVie research scientists, IT specialists, and other business analysts to facilitate effective project communication while outlining the digital pathology landscape.
- Leveraged external SMEs to identify potential growth and investment areas to help advance AbbVie's greater data-convergence strategy.

Wake Forest University School of Medicine

Bioinformatics Intern

05/2023 – 08/2023

- Embedded a cardiovascular disease prediction AI model on a mobile application using TensorFlow-Lite, improved AI inference time by over 93% from previous generations.
- Created a cox-regression model to incorporate meta-factors such as BMI and age while accounting for time-to-event data to create a more comprehensive risk score.
- Optimized the risk prediction pipeline for edge devices and decreased ECG processing time to under 25ms.
- Improved the interoperability of the research application to power a suite of AI-based prediction models.

Biomedical Engineering Society

Technical Director

05/2023 – Present

- Managed all technical projects undertaken by BMES, from surgical robotics to collegiate design challenges.
- Achieved a 50% budget reduction by removing unnecessary committees and increasing virtual events.
- Prioritized exposure and skill development among 200+ members, particularly underclassmen.

Engineering Team Lead

08/2022 – 04/2023

- Awarded 2nd for *Outstanding Freshman Exhibit* during Engineering Open House among 200+ competitors.
- Designed a novel rotational isolation system for bicycle helmets using CAD, offering enhanced protection during angled impacts.
- Formalized the construction of a testing rig that provides rotational freedom in two axes.
- Coordinated communication between college administration and sub-teams to ensure budget compliance.

Grainger College of Engineering

Undergraduate Course Assistant – BIOE 205

01/2024 – Present

- Worked closely with the course professor to increase student engagement by facilitating in-class activities.
- Addressed gaps in student understanding by leading after-class workshops targeted at complex topics.

PERSONAL PROJECTS

Heart Rate Variability Screener:

- Developed an innovative heart-rate variability detection method in MATLAB via Wavelet Denoising and Fast Fourier Transform.

Photo Mosaic Board:

- Designed an innovative image-fusion algorithm utilizing k-D Trees to craft custom PNG mosaics album covers that resemble any desired image.

Eco-Friendly Flight Planner:

- Worked with a team to architect an advanced flight planning algorithm, harnessing data from over 14,000 airports and 67,000 routes.

Abe's Page:

- Created an interactive personal portfolio using React, Tailwind, and Framer Motion to showcase my academic and professional background.