Abraham Alkhatib

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EDUCATION

University of Illinois at Urbana-Champaign   **Expected 05/2025**
- Bachelor of Science, Bioengineering   GPA: 3.73/4.00
- **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
Technology Consultant   **01/2024 – Present**
- Conducted organization-wide internal consulting, data analytics, and market research regarding precision medicine and digital pathology to advance information research ahead of industry trends.
- Worked 1-on-1 with AbbVie research scientists, IT specialists, and other business analysts to identify potential growth and investment areas.

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 (BMES)
Technical Director   **05/2023 – Present**
- Managed and allocated funding for all technical projects undertaken by BMES.
- 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.

Pueblo Supermarkets
Operations Intern   **01/2020 – 08/2021**
- Streamlined the integration of newly acquired machinery by intermediating between contractors and store management.
- Shadowed store managers, maintenance crews, and other employees.

PERSONAL PROJECTS

Heart Rate Variability Screener:
- Developed an innovative heart-rate variability detection method in MATLAB via Wavelet Denoising and Fast Fourier Transform.

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.

Photo Mosaic Board:
- Designed an innovative image-fusion algorithm utilizing k-D Trees to craft PNG mosaics from a collection of photos, resembling any desired image.

Abe's Page:
- Created an interactive personal portfolio using React, Tailwind-CSS, and Framer Motion to showcase my professional background with a hint of personality.