JAKE FLYNN
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EDUCATION

PURDUE UNIVERSITY, School of Engineering **West Lafayette, IN**
Bachelor of Science Mechanical Engineering; Minor: Business Economics **May 2023**
Dean's List 7/7 Semesters, Semester Honors 6/7 Semesters
GPA: 3.72

TECHNICAL SKILLS

Technologies: JavaScript, TypeScript, NodeJS, SQL, HTML, CSS, Python, Rust, Svelte, SvelteKit, React, AWS

BODY OF WORK

SENIOR DESIGN PROJECT **January 2023 - May 2023**
- Developed wearable concussion detection technology by designing a custom flexible PCB board using KiCad to amplify voltage output of force sensor array
- Transmitted raw voltage data from an Arduino via BLE, and calculated the true force delivered to the head, while also outputting the calculated location of the hit on a 3D model of a head in real-time
- Created a user-friendly website for the technology using Flask, ensuring a seamless user experience
- Finished 4th / 68 Mechanical Engineering Senior Design Teams in the Malott Innovation Competition

FREELANCE / PERSONAL PROJECTS **January 2023 - May 2023**
- Developed machine learning models to forecast NBA player career trajectories, achieving a 90% accuracy rate in prediction. Created a dynamic website using SvelteKit, CloudFlare, and AWS to visualize these models, ensuring efficient data processing, a seamless user experience, and robust scalability. Website can be seen here.
- Created an immaculate grid-esque game for guessing songs in which artists were featured on using the Spotify API and hosting on Vercel. Website can be seen here.
- Contracted to create data visualizations for the ShotQuality social team using player tracking data. Work can be seen on some of their marketing and Twitter posts.
- Built a bot to tweet at my friends every morning using the OpenAI API, Twitter API, and AWS Lambda Functions. Code can be seen on my Github.

MACHINE LEARNING NANOSCALE HEAT TRANSFER RESEARCH **West Lafayette, IN**
Professor Xiulin Ruan, Purdue FLEX Labs **January 2023 - Present**
- Conducted research on potential ultra-white, hyper-cooling paints by utilizing query techniques, web scraping, and APIs to compile a list of 25 materials based on their optical properties
- Utilized machine learning techniques to identify materials with consistent properties as other ultra-white materials, improving the efficiency and accuracy of the research process

AMPHENOL COMMUNICATIONS SOLUTIONS **San Jose, CA**
Field Applications Engineer Intern **May 2022 – August 2022**
- Conducted a 12-week long project to evaluate if 3D printing was feasible to print press fit tools to create in-house tooling using SolidWorks for vertically aligned high-speed backplane connectors with a $10,000 budget
- Performed bi-weekly customer product teardowns of data-center products collaboratively to identify both Amphenol and competitor connectors and cables to estimate SAM and maximize market share
- Attended customer meetings to gain practical knowledge of supplier-customer relationship and early engagement design activities
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UTAH TECH FOOTBALL **St. George, UT**
Special Teams Assistant Coach, Division 1 **May 2021 – May 2022**
- Extracted plays from 12 opponents' past games through film dissection to improve overall team execution
- Composed scouting report and communicated weekly opponent analysis to Special Teams Coordinator

Awards/Activities

Eagle Scout, Sports Analytics Club Purdue, Star Wars Club Purdue, Intramural Soccer, Intramural Basketball, Paint Crew