Andrew Zoghby

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🎓 Education

May 2022	**University of Illinois Urbana-Champaign** *BS in Computer Engineering.* GPA: **3.88** / 4.0	College of Engineering Dean's List
May 2018	**Parkway South High School**. Suma Cum Laude

💼 Work Experience

Caterpillar, *Engineering Intern*
- Programmed new engine display features using Java and HTML.
- Designed an emulation platform to provide analytics data to legacy platforms.
- Analyzed memory chip failures to assess future risk and minimize it.
- Designed service routines to locate hard to detect, mechanical faults on engines.
- Integrated new requirements into existing control system specifications.
- Implemented control system specifications with Matlab Simulink.
- Built and Launched a collaborative calibration management database allowing calibration engineers to reuse past calibrations and distribute new features to relevant engines.
- Developed software tools to simplify interactions with the requirements database.
- Performed hardware in the loop (HIL) testing on pre-release software.

Offroad Illini - Baja SAE Team, *Electrical and Drivetrain Subteam Member*
- Redesigned gearbox shafts to be more reliable and durable.
- Assisted in manufacturing of suspension and drivetrain components.
- Designed and built a track timer utilizing an arduino and sensors such as a radar.
- Programmed a Java android app to interface with the timer via bluetooth.

First Tech Challenge Robotics Team, *Captain and Lead Programmer*
- Led team to two consecutive placements at the First World Championship.
- Planned and ran events at elementary schools about STEM education.
- Analyzed camera images using OpenCV.

👤 Skills

C, C++, x86 ASM, Java, Python, Matlab Simulink, Visual Basic, HTML, LaTeX

git, Native Android Development, Linux System Development, Microsoft Excel Macros

📖 Relevant Courses

ECE 391 Computer Systems Engineering, ECE 486 Control Systems, CS 225 Data Structures, ECE 210 Analog Signals and Systems

🏆 Awards

UIUC College of Engineering Dean's List, HackIllinois Unanimous Grand Prize Winner, Uncommon Hacks First Place IOT Prize Winner, Eagle Scout, FIRST Dean's List Semi-Finalist