

RAIYAN H. AUSAF

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EDUCATION

UC BERKELEY – BERKELEY, CA

2022 - PRESENT

- Bachelor of Science in Electrical Engineering Computer Science (EECS) **GPA: 3.9**
- Courses: Structure and Interpretation of Computer Programs, Discrete Mathematics and Probability Theory, Multivariable Calculus, Designing Information Devices and Systems
- Awards: Regents' and Chancellors' Scholarship Winner, The Leadership Award (Auto-Recipient)

DIAMOND BAR HIGH SCHOOL -- DIAMOND BAR, CA

2018 - 2022

- Valedictorian GPA: 4.0 (Unweighted)

EXPERIENCE

BERKELEY FORMULA RACING: SAE TEAM

2022-PRESENT

- **ELECTRICAL SUBTEAM:** Experienced in PCB Design, developing harness systems, and implementing data acquisition systems; currently leading and developing custom-built live telemetry system that implements antennas to send data read from sensors, which utilize CAN protocol
- **LEAD COMPETITION PRESENTER:** Leading the development of our cost-benefit analysis presentation of electrical components for competition in Michigan; involves communication with the engine subteam on design choices

LAB RESEARCH – FLEXIBLE ELECTRONICS

2022-PRESENT

- **RESEARCHER:** Conducted research in flexible electronics for efficient printing methods and implementation of sensors/power sources in medical devices used for sensing; shadowed Professor Ana Claudia Arias and worked in lab with other researchers

BOEING INTERNSHIP

SUMMER 2021

- **NETWORK AND SPACE SYSTEMS ENGINEER:** Researched software development with a special interest in cyber security; Install, learn, and operate an optical communication link simulator
- **INTEGRATED PRODUCT TEAM LEAD:** Conducted and documented research on space debris; Developed CAD model to design a device capable of hindering the threat of space debris; utilized physics proofs, possible locations, and cost-benefit analysis of our product; impressed lead mechanical engineers with our innovative design

FIRST ROBOTICS TEAM 3473: TEAM SPROCKET

2018 - 2022

- **TEAM CAPTAIN:** Organized the manufacturing timeline of the robot, made final design decisions; Partnered with Friends of Yimbo (nonprofit) to fundraise for improving school and living standards in Kenyan villages; managed demonstrations at STEAMPosium and STEAMFair; connected with other FIRST teams to host collaborative workshops
- **PROGRAMMING MEMBER/SUBSYSTEM LEAD:** Leadership role in climb design of robot; delegated CAD parts; worked with other leads to facilitate overall production of the robot; utilized ReactJS to program front-end of Scouting Application; programmed driver control with Java

LANGUAGES: Python, Java, SQL, Scheme, HTML, CSS | SOFTWARE: Android Studio, VS Code, Git, SOLIDWORKS, ReactJS

PROJECTS

- **SCHEME INTERPRETER:** utilized Python to interpret Scheme; performed lexical analysis and mapped special forms to python functions; implemented tail recursively; developed mutual recursion for evaluation and applying
- **LIVE TEMELETRY SYSTEM:** implements antennas and Arduino to process CAN data and send it over antenna; allows live visualization of car metrics
- **SCOUTING APP:** web-application that would implement user determined data and store it for match analysis; implemented MySQL to fetch specific data and paired it with ReactJS/Bootstrap to present the data in graphs/tables; influenced game strategy and team selections