# Raiyan Ausaf

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## Education

**University of California, Berkeley** — Berkeley, CA
*Bachelor of Science - Electrical Engineering and Computer Science GPA: 3.733* — *Expected: May 2025*
- Courses: Data Structures, Discrete Mathematics, Algorithms, Probability Theory, Random Processes
- Honors: Regents' and Chancellor's Scholarship, The Leadership Award

**Diamond Bar High School** — Diamond Bar, CA
*Valedictorian GPA: 4.00*

## Experience

**Berkeley Formula Racing: SAE** — September 2022 – Present
*University of California, Berkeley* — *Richmond, CA*
- Led the development of cost presentation for competition (placed 2nd); communicated with all other 9 subsystems on design choices and potential solutions to reduce overall cost of assemblies
- Developed and printed PCB designs; integrated 10-15 different sensors with harness systems for the engine and chassis subsystems

**X-Camp Academy Teaching Assistant** — May 2023 – Present
*Competitive Programming Teaching Assistant* — *Remote*
- Assist teacher during 2 hour lectures by providing explanations for questions related to data structures and algorithms; communicated with parents weekly on individual student progress via emails and reports
- Held weekly office hours for 2-3 hours to assist students on conceptual topics and provide debugging assistance on HW assignments

**Lab Research - Flexible Electronics** — January 2023 – May 2023
*University of California, Berkeley* — *Berkeley, CA*
- Conducted research for efficient printing methods and implementation of sensors/power sources in medical devices
- Shadowed Professor Ana Claudia Arias and assisted in providing Python scripts for product implementation

**Boeing Internship** — Summer 2021
*Network and Space Systems Engineer* — *Huntington Beach, CA*
- Conducted and documented research on space debris; developed potential solutions with associated CAD models
- Researched software development with a special interest in cybersecurity; installed, learned, and operated an optical communication link simulator

## Projects

**Live Telemetry System** | *Altium, Arduino, Arduino IDE, CAN, Python* — September 2022 - Present
- Integrated CAN protocol to send cruical data from 3-4 engine sensors wirelessly through antennas for live analysis
- Data received is processed as serial data and car metrics are visualized through desktop app during live runtime

**Receiptify Clone** | *ReactJS, Spotify API, VS Code, Postman* — July 2023 - Present
- Developed a web application which showcased a user's most popular songs for the week with other features
- Implemented Spotify OAuth to access user's playlists and listening data

**Personal Website** | *ReactJS, ExpressJS, Tailwind, Figma* — May 2023 - June 2023
- Implemented a log-in feature utilizing a custom backend server to generate token for user authentification
- Developed user-friendly and functional design through Tailwind

**Scheme Interpreter** | *Scheme, Python, Sublime Text* — November 2022 - December 2022
- Developed Python program to interpret Scheme; performed lexical analysis and mapped special forms to python functions
- Implemented tail recursively and developed mutual recursion for evaluation and applying

## Technical Skills

**Languages**: Java, Python, Scheme, SQL, JavaScript, HTML, CSS, PHP
**Frameworks**: ReactJS, Node.js, Express.js
**Developer Tools**: Git, Docker, VS Code, PyCharm, IntelliJ IDEA, Eclipse, Postman, SOLIDWORKS (PDM), RapidHarness, Altium