KHUSHANT KHURANA

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SUMMARY

Mechanical engineering student with experience in computer aided design, extensive team projects and problem solving.

EDUCATION

THE COOPER UNION FOR THE ADVANCEMENT OF SCIENCE AND ART, MANHATTAN NY
Bachelor of Engineering, Expected May 2024
GPA: 3.72

QUEENS HIGH SCHOOL FOR SCIENCES AT YORK COLLEGE, QUEENS NY
High School Diploma, June 2020
Salutatorian, GPA: 100.04% (4.0)

EXPERIENCE

COOPER UNION MOTORSPORTS FORMULA SAE TEAM August 2022 – Present

STEERING SUB SYSTEM LEAD

- Analyzed 2021's car track data for multiple laps to decide the steering geometry for 2022's car.
- Machined tie rod clevises, toe link clevises, rocker mounts, wheel pegs, brake bobbins, and shock end caps using mill and lathe.
- Designed the steering stops and prepared an impact test to ensure its longevity.

COOPER UNION MOTORSPORTS FORMULA SAE TEAM September 2021 – May 2022

SUSPENSION SUB SYSTEM LEAD

- Worked on the spring and damping mechanism of the 2020's Formula car using a quarter car model from Amesim Simcenter and analyzed vehicle's behavior under various damping coefficients.
- Conducted a tire model study using data from Tire Testing Consortium to determine the nominal loading conditions, such as lateral force and aligning moments, and wheel alignment parameters for the used tires.
- Validated the 2021's suspension geometry and chosen suspension parameters, such as castor and king pin inclination, using multibody simulations provided by Amesim.
- Designed the control arms, rockers, and push rods for the suspension assembly and validated the linkages using Finite Element Analysis.
- Machined the clevises – linkages between the frame and control arms.
- Helped the underclassmen learn about a formula car's suspension and foster them to contribute to the best of their ability.

EXPLAINER TRAINEE (NEW YORK HALL OF SCIENCE) October 2019-Present

- Interact with the visitors to educate them about the science exhibits and help them understand the STEM principles.
- Perform science-related demonstrations to lure the audience into learning about the science behind day-to-day machines.
- Create online educational videos regarding DIY projects for the visitors to learn from home. (YouTube- Explainer Tv)
- Participate in career-oriented workshops and learn critical presentational skills.

RESEARCH ASSISTANT AT DATA ANALYTICS (NEW YORK HALL OF SCIENCE) June 2019-August 2019

- Analyzed the surveys collected form the visitors at the museum and interacted with them regarding the same.
- Helped the staff in making decisions regarding the required changes in the museum based off the surveys.
- Interacted with the fellow interns to assess the general patterns of the audience in the museum.

ADDITIONAL QUALIFICATIONS

- Proficient in C, C++, and Python.
- Proficient in Solidworks, NX, and Microsoft Applications
- Trilingual – English, Hindi, and Punjabi

CLUBS / INVOLVEMENT

COOPER UNION SOCIETY OF ASIAN SCIENTISTS AND ENGINEERS September 2020-Present

- Interact with fellow engineers and participate in career related events.

AWARDS

- NATIONAL HONOR SOCIETY – 2020
- DOWNTOWN MATHEMATICS INVITATIONAL- 2017