

SANJEEV CHAUHAN

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“Hoping to discover the intersection of mechatronics, data science and high-performance computing.”

EDUCATION

Duke University

May 2025 (expected)

B.S. in Electrical and Computer Engineering and Computer Science | Innovation & Entrepreneurship certificate

Durham, NC

- **GPA:** 4.00/4.00
- **Programs:** XPRIZE rainforest robotics team, Duke Robotics Mentorship, Aeroelasticity Research, Duke Quantitative analysis
- **Relevant Coursework:** Machine Learning, Linear Algebra, Modern Physics, Data Structures and Algorithms

South Carolina Governor's School for Science and Mathematics (SCGSSM)

May 2022

Summa Cum Laude

Hartsville, SC

- **GPA:** 3.915/4.0 | **SAT:** 1570/1600 (Math: 790, Reading: 780) | **ACT:** 35/36
- **Honors:** SCGSSM Robotics Award, FRC Design Award S.E. region, National Merit Finalist, National AP Scholar

WORK EXPERIENCE

Duke Aeroelasticity Lab | Computational Fluid Dynamics Researcher

(Durham, NC) May 2022 – Current

- Conducted grad-level CFD research on transonic airflow over a wing, examining the little-explored area of transonic buffet
- Investigated use of Euler equations as a less computationally intensive alternative to Navier-Stokes equations
- “Sanjeev's work could easily produce data for a master thesis at many universities” – Earl Dowell (William Holland Hall Distinguished Professor)

Chapel Headshots | Founder and CEO

(Durham, NC) Aug 2022 – Current

- Founded Duke's premier professional headshot business | Directed marketing strategies and customer service relations.

FIRST Robotics Mentor | FTC 327 and FTC 22534

Jan 2023 – Current

- Leveraged five years of FIRST robotics experience to mentor the top-ranked FTC team in SC
- Integrated odometry-based autonomous control and CNC manufacturing techniques to provide team members with education on industrial manufacturing and high precision control systems

Self-Driving Golf Cart Initiative | Design / Mechanical Lead

Jan 2022 – May 2022

- Designed and constructed a fully autonomous self-driving golf cart using a modular system that creates an eco-friendly, on demand campus transportation fleet from old golfcarts and offers independence to disabled individuals
- \$35,000 in grants from Google, SC Department of Education, and the GSSM Foundation | praise from Boston Dynamics
- Implemented linear actuators, LiDAR, Nvidia Jetsons, and stereolithographic cameras to enable autonomous drive by wire

University of South Carolina Advanced Research Computing Lab | Deep Learning Researcher

Jun 2021 – Aug 2021

- Conducted a performance analysis of PyTorch, TensorFlow, and MxNet deep learning frameworks on ImageNet, CIFAR10, and CIFAR100 datasets
- Revealed accuracy differences between Deep Learning frameworks, revealing a new research field for the USC ARC Lab
- Authored paper for South Carolina Junior Academy of Sciences (3rd place) / Presented oral presentation (2nd place)

LEADERSHIP & EXTRACURRICULAR INVOLVEMENT

SPARK! (SCGSSM) | Voluntary Student Leader

Sep 2020 – May 2022

- Planned, managed, and taught interactive, engaging lessons in STEM subjects to over 80 middle schoolers from across SC
- Pioneered addition of two new lessons, managed student teams | led new effort to teach code to local community
- Taught and led lessons in robotics, Chinese, Latin, Math, US history, and spearheaded 8-week python course

Duke XPRIZE Robotics Team | Rainforest Drone Team

Aug 2022 – Present

- Designed motor harness for drone and gel-based vibration-dampening system while auditing XPRIZE class (ECE 365)

SCGSSM Mindfulness Program | Founder and President

Jan 2021 – May 2022

- Established afterschool mindfulness course in collaboration with school administration and certified yoga instructor
- Led biweekly meditations and assisted students in developing social/emotional tools for mental wellness, academic success

FIRST Robotics | Team Captain (FTC 327) | Lead Driver, Fabrication Specialist (FRC 2815)

Jan 2020 – Present

- Founded a fabrication sub team and re-structured FRC 2815's mechanical workflow, introducing OnShape and maintaining a complete CAD model of our competition robot, enabling precise part fabrication and allowing the team to reach the Palmetto regional quarterfinals, placing 14th of 63 teams from ten states | Headed drive team to win SCRAP 2021 regionals

Cross Country | Assistant Coach, Team Captain, Varsity

Jun 2019 – May 2022

- Assisted small STEM boarding school's cross country team in improving performance by suggesting stretches and workouts from previous team and leading Friday practices | Led team to achieve perfect regional score

SKILLS AND INTERESTS

- **Skills/Certifications:** Polish (fluent), Chinese (conversational), MATLAB, Python, Java, ANSYS fluent, SOLIDWORKS
- **Interests:** XC running, Cooking, Mountain Biking, rock climbing, Skiing, AI, 3D printing, CNC machining, CAD