SANJEEV CHAUHAN

Durham, NC | (803) 724 8467 | sanjeev.chauhan@duke.edu | sanjeev.one

EDUCATION

Duke University - Erdman engineering scholarship recipient **May 2025 (expected)**
B.S. in Electrical and Computer Engineering and Computer Science | Innovation & Entrepreneurship certificate Durham, NC
- **GPA:** 3.78/4.00

South Carolina Governor's School for Science and Mathematics (SCGSSM) **May 2022**
- **Honors:** SCGSSM Robotics Award, FRC Design Award S.E. region, National Merit Finalist, ACCESS CCEP Grant

WORK EXPERIENCE

DeAP Learning Labs (deaplearning.com) | *Founder and CTO* **(Durham, NC) April 2023 – Current**
- Founded and technically directed an AI-driven educational startup that has empowered over 95,000 students with personalized AP history exam preparation, transforming traditional education through scalable, interactive AI.
- Developed custom, scalable RAG based generative AI API on AWS using docker, flask, gunicorn, nginx, GitHub workflows CI/CD

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
  10.13140/RG.2.2.29185.53607

Duke Capital Partners (dukecapitalpartners.duke.edu)| *Computer Science Associate* **(Durham, NC) Oct 2023 – Current**
- Conducted comprehensive due diligence for AI startup investments at a leading venture capital firm, influencing multi-million dollar decisions and contributing to strategic portfolio management.
- Youngest Associate to be hired

Stanford Linear Accelerator Center National Lab | *Machine Learning Researcher* **Jun 2023 – Aug 2023**
- Re-engineered FACET-II's computer simulation infrastructure, implementing algorithmic control to improve efficiency
- Developed a fast machine learning model for the FACET-II photo injector, a speed up of 26,000X vs traditional simulations
- Recognized for exceptional performance and innovation, earning a return offer to continue spearheading machine learning research
- Leveraged a technology stack consisting of XOPT, MATLAB, and OpenPMD. Employed Bayesian optimization and Controlled Non-dominated Sorting Genetic Algorithm for advanced simulation optimizations, while seamlessly executing MATLAB functions through Python for enhanced process automation 10.13140/RG.2.2.19218.84166

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 Research Computing Lab | *Deep Learning Researcher – High School* **Jun 2021 – Aug 2021**
- Conducted an analysis of PyTorch / TensorFlow / MxNet deep learning frameworks on ImageNet / CIFAR10 / 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

Duke Robotics Mentorship | *Duke Club President* **Jan 2023 – Current**
- Headed and grew organization dedicated to delivering free, hands-on robotics and programming courses to four local middle schools, demonstrating exceptional management skills and commitment to educational outreach

Duke XPRIXE Robotics Team | *Rainforest Drone Team Lead* **Aug 2022 – Current**
- Designed motor harness for drone and gel-based vibration-dampening system while auditing XPRIZE class (ECE 365)

Mindfulness Program | *Founder and President* **Jan 2021 – May 2022**
- Established permanent mindfulness course in collaboration with school administration and certified yoga instructor

FIRST Robotics | *Team Captain (FTC 327) | Lead Driver, Fabrication Specialist (FRC 2815) | Current Mentor* **Jan 2020 – Current**
- Founded a fabrication sub team and re-structured FRC 2815's mechanical workflow, introduced OnShape and maintained 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

SKILLS AND INTERESTS

- **Skills/Certifications:** Polish (fluent), Chinese (conversational), MATLAB, Python, Java, ANSYS fluent, Linux, CAD, Jira, Confluence, Git, AWS – EC2, lambda, App Runner, ECR, VPC, AZURE – Hosting, Docker, K8s, WSGI API
- **Interests:** XC running, Cooking, Mountain Biking, rock climbing, Skiing, AI, 3D printing, CNC machining, CAD