

BENJAMIN CHAUHAN

(803) 724-8468 | benjamin.chauhan@duke.edu

EDUCATION

Duke University | GPA: 3.925/4.0

May 2026

B.S. in Computer Science '25, Masters in Electrical Engineering - Machine Learning Track '26

Durham, NC

Relevant Coursework: ML Algorithms, ML Systems, Deep Learning, Transformer Architecture, Robot Learning, AI Security

WORK EXPERIENCE

Pacific Northwest National Lab | Deep Learning Research Intern

(Seattle, WA) **June 2025 – May 2026**

- Built tested and integrated a map image classification pipeline, scaling up to 1.2M + map permitting images in NEPATEC 2.5
- Designed the entire pipeline from annotation guide to collecting labelled data and scaling out to the NEPATEC corpus
- Building an automatic georeferencing framework to transform scanned permitting map images to georeferenced geojson layers

Duke General Robotics Lab | Deep Learning Researcher

(Durham, NC) **September 2025 – May 2026**

- Built an automated pipeline with YOLO and VLLM models to detect privacy leakage in large scale robot learning datasets
- Detected privacy leaks (passwords, emails, phone numbers) in the DROID robotics dataset, demonstrating the issue at hand

UofSC Research Computing Internship | Deep Learning Research Intern

(Durham, NC) **June – July 2024**

- Evaluated the performance of DeepSolo and GoMatching frameworks for scene-text detection on USC's historical film archive
- Increased the performance of DeepSolo on grayscale images by 61% through re-training and fine-tuning on grayscale images

SLAC National Lab E-log Chatbot | Researcher

(Stanford, CA) **July 2024 – September 2024**

- Built a containerized RAG chatbot for SLAC's FACET-II lab on Open Webui, Langfuse, and RagFlow, enabling users to ask complex questions about the lab's operations; contributed to Open Webui
- This system is being extended to work with all of SLAC, encompassing the entire e-log of all accelerator runs

DeAP Learning Lab (deaplearning.com) | Founder, Former CIO

(Durham, NC) **2023 – May 2024**

- Founded and led an AI-driven educational startup that has empowered over 200,000 high school students with free personalized AP exam tutoring, working with large YouTubers like Heimler's History and helping students answer over 3 million questions
- Designed and built a scalable lightweight RAG Agent API built on FastAPI, Weaviate maintaining 98.82% uptime

Duke Hospital Brain Science Engineering Lab | Research Engineer

(Durham, NC) **2022 - 2024**

- Designed and implemented testing of a new open-source Computer Vision platform for TMS (100x cheaper than current options)

University of South Carolina Advanced Research Computing Lab | Junior Researcher

(Columbia, SC) **2021**

- Revealed accuracy differences between Deep Learning frameworks for image classification tasks, new research field for ARC Lab
- Authored a [paper](#) for the South Carolina Junior Academy of Sciences, winning 3rd place for its category

Self-Driving Golf Cart | Machine Learning Specialist | Founded ongoing initiative

(Hartsville, SC) **2022**

- Designed and built a modular fully autonomous golf cart system, transforming old golf carts into safe, eco-friendly transportation
- Designed AI driving system that took data from stereoscopic cameras, LIDAR sensors, YOLOv7 and GPS, allowing cart autonomy
- Secured \$35,000 in grants from Google, SC Department of Education and praise from Boston Dynamics

LEADERSHIP & EXTRACURRICULAR INVOLVEMENT

Duke IEEE Computer Society | President

Jan 2025 - Present

- Organized and ran 20+ events connecting Duke students to industry professionals across technology sectors
- Oversaw conference travel for over 25 students (Supercomputing 25, IEEE Southeastcon 25, SatShow 26)

Duke Robotics Mentorship | Vice President

Jan 2023 – Present

- Managed communication between Durham School system and DURM, coordinated transportation and a \$4000 budget
- Coordinated lesson plans across 4 middle schools, impacting 80+ students; secured an additional \$1,500 in grants

SCGSSM Spark! | Student Teacher

2020 –2022

- Planned, managed, and taught interactive, engaging lessons in STEM subjects to over 60 middle schoolers from across SC
- Managed two teams of student teachers, creating lesson plans and materials and directing two live lessons

PROJECTS

[iQuHack 26](#) | Built a hybrid quantum/classical system to solve the LABS problem, 1st place in NVIDIA challenge

February 2026

[CHopT/CHAD](#) | Integrated Hopfield networks into LLMs to enable memory across multiple inference instances

May 2024

[SimpleRAG](#) | Built a minimal repository to get a simple RAG chatbot up and running with just a few lines of code

October 2024

[Audio2Blog](#) | Serverless Rust AWS microarchitecture that deploys recorded conversations into AI written Blogs

May 2024

SKILLS AND INTERESTS

Skills/Certifications: Python (PyTorch, TensorFlow, Detectron2), Rust, SQL, FastAPI, Docker, Docker-compose, Apptainer, AWS (Lambda, EC2, Bedrock, S3, K8s), MLOps, HPC DevOps | Chinese (Conversational), Polish (Fluent)

Awards: iQuHack 26 Winner (NVIDIA Track), Duke Dean's List, FIRST SC Scholarship, ACCESS CCEP Grant