



Nitin Gupta

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Portfolio

EDUCATION

University of South Carolina

B.S. in Computer Science; Aug 2021 – May 2025

Minors in Mathematics, Data Science

Columbia, SC

GPA: 4.0/4.0

President's Honor List (since Aug '21)

Relevant coursework: Artificial Intelligence, Big Data Analytics, Software Engineering, Database Design

SKILLS

Advanced in Python, Java, C++, Linux, git, L^AT_EX

Intermediate in PyTorch, SQL, NoSQL, R, Apache Hadoop

Native in English, Hindi, Punjabi

Proficient in Spanish

EXPERIENCE

AI Researcher

University of South Carolina, AIISC

Columbia, SC

Aug 2024 – Present

- Developing innovative chatbot systems to promote voter participation among vulnerable groups
- Developing automated literature categorization tools, contributing to advancements in AI applications

Explainable AI Research Intern

University of South Carolina, AIISC

Columbia, SC

May 2024 – Aug 2024

- Developed a framework using NLP and enriched knowledge graphs to generate transparent, context-aware explanations for AI-generated Sokoban plans, enhancing Explainable AI
- Conducted traffic data analysis for the SCDEC by identifying collision patterns and evaluating safety programs

Machine Learning Researcher

University of South Carolina, Digital Research Services

Columbia, SC

Aug 2022 – Apr 2024

- Conducted data mining on South Carolina Laws using Python and Natural Language Processing
- Trained machine-learning algorithms to study the prepared session laws and identify Jim Crow Language

Material Analysis Researcher

University of South Carolina, Jefferson Lab

Columbia, SC

Jun 2022 – Oct 2022

- Enhanced high energy physics research by developing C++ analysis code to process simulated data for various magnet materials, leading to potential cost savings of over \$1,000,000
- Contributed to the design of a muon detection system for a new particle accelerator using data analysis

Volunteering Ambassador

Trew Friends

Columbia, SC

Aug 2021 – Present

- Promoted organ, eye, and tissue donation at the University of South Carolina, informing and educating people about the importance of donation.
- Successfully persuaded over 300 individuals to register as donors on the national organ donor registry.

AWARDS & ACHIEVEMENTS

McNAIR Junior Fellowship for undergraduate computer science research.

May 2024

Phi Beta Kappa Freshman Award for outstanding academic performance at USC.

Apr 2023

Research Presentation at CEU to computer science and nuclear physics professionals.

Oct 2022

PERSONAL PROJECTS

Segify: Semantic Segmentation for Localized Artistic Effects

🌐 g-nitin/stylized-segmentation

- Built a neural style transfer app enabling real-time, localized style transfer using SoTA segmentation techniques
- Developed an intuitive UI for user-driven content and style region selection

Deep Learning & Autoencoders for Colorization

🌐 g-nitin/convolutional-autoencoder

- Developed a convolutional autoencoder for accurate image colorization of b&w photographs using PyTorch
- Trained the model on nearly 28,000 images real-world images from the Google Landmarks dataset