Nitin Gupta

in niting9 | +1 803 470 9214 | niting1209@gmail.com | g-nitin | Columbia, SC | Portfolio

Education

University of South Carolina (Aug 2021 – May 2025) **GPA: 4.0/4.0**

B.S.**: Computer Science; **Minors**: Mathematics, Data Science; **Accelerated Masters Track *President's Honor List (since Aug '21)*

Relevant coursework: Artificial Intelligence, Neuromorphic & Edge Computing, Machine Learning Systems, Big Data Analytics, Software Engineering, Computer Architecture, Database Design

Skills

Advanced in Python, PyTorch, C++, Java, Linux, git, LaTeX

Intermediate in JavaScript, React, SQL, NoSQL, R, Apache Hadoop

Native in English, Hindi, Punjabi

Proficient in Spanish

Experience

AI Researcher Columbia, SC

AI Institute of USC, University of South Carolina *Aug 2024 – Present*

- Actively conducting research at the intersection of Neuro-symbolic AI and Natural Language Processing
- Developed innovative chatbot systems to promote voter participation among vulnerable groups
- Developed automated literature categorization tools, contributing to advancements in AI applications

Volunteering Ambassador Columbia, SC

Trew Friends *Aug 2021 – Present*

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

Explainable AI Research Intern Columbia, SC

AI Institute of USC *May 2024 – Aug 2024*

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

Machine Learning Researcher Columbia, SC

Digital Research Services, University of South Carolina *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 Columbia, SC

Jefferson Lab, University of South Carolina *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

Publications

Towards Enhancing Road Safety in South Carolina Using Insights from Traffic and Driver-Education Data *AAAI 2025 (Accepted)*

N. Gupta, B. Muppasani, et al.

Building a Plan Ontology to Represent and Exploit Planning Knowledge and Its Applications *CODS-COMAD 2024 (Accepted)*

B. Muppasani, N. Gupta, V. Pallagani, B. Srivastava, et al.

Awards & Achievements

AAAI Student Scholar encouraging student participation in the AI research community *Feb 2025*

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

RoostAI: A University Centered Chatbot RoostAI

- Developing a conversational AI system using LLMs & RAG, enabling USC to ask questions, get answers, and explore campus services

Segify: Semantic Segmentation for Localized Artistic Effects stylized-segmentation

- Built a neural style transfer app enabling real-time, localized style transfer using SoTA segmentation techniques

Deep Learning & Autoencoders for Colorization convolutional-autoencoder

- Developed a convolutional autoencoder for accurate image colorization of b/w photos using PyTorch on 28,000 images