Nikhil Kapila

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Summary

Skilled Machine Learning Practitioner with hands-on experience with Machine Learning and Deep Learning techniques coupled with experience in lighting and lighting control systems. Proven ability to design and deploy AI models, optimize ML pipelines, and implement smart control solutions.

Education

Georgia Institute of Technology   Jan 2023 — Present
Master of Science in Computer Science - Artificial Intelligence (OMSCS Program)   *Atlanta, GA*

- Current GPA: 4.00 / 4.00
- Completed Coursework: Deep Learning, Research Work, Machine Learning, Software Development Process, Knowledge-Based AI, Human-Computer Interaction, Natural Language Processing, Big Data for Health
- Ongoing Coursework: Video Game Design (Summer 2025)
- Upcoming Coursework (Fall 2025): TBA
- `Unofficial` TA for Georgia Tech's Machine Learning class. Maintaining `mlrose-ky` library and documentation used in the class.

National Institute of Technology   2014 — 2018
Bachelors of Technology in Electronics and Communication Engineering   *New Delhi, India*

- GPA: 6.97 / 10.00
- Excelled in CS-related course work: Data Structures, Algorithms, Object-Oriented Programming, Computer Networks, Image Processing

Employment History

Technical Engineer   Jun 2018 — Present
Luxtron Systems   *United Arab Emirates*

- Led the transition towards lighting and control systems from LED components which increased business value.
- Designing and installation of lighting control systems.
- Collaborated with cross-functional teams to deliver customized control solutions.
- Currently working on integrating AI features into our service offerings:
  - Trying to automate the commissioning process using Agents or similar.

Graduate Researcher   May 2024 — Aug 2024
Georgia Institute of Technology   *Remote (Atlanta, GA)*

- Graduate researcher, a part of the [Human-Augmented Analytics Group](#).
- Implemented a full MLOps pipeline and researched whether LSTM models could be democratized on different building data. Published findings and models on HuggingFace Spaces and Github.

R&D Trainee   Aug 2019 — Sept 2019
Helvar Oy Ab   *Finland*

- Evaluated intelligent wireless nodes for lighting control systems.
- Created technical documentation for AC-DC converters in LED lighting.
- Presented market research findings for Middle Eastern lighting trends.

Research Intern   2017 — 2018
Indian Institute of Technology, Delhi   *New Delhi, India*

- Developed simulations for quadrotor systems using MATLAB Simulink.
- Analyzed mechanical systems leading to quadrotor design optimizations.

Research Work (Pre Prints)

- **Kapila, N.** & Rathi, T. (Apr 2025) ["FarSightBERT: Enhancing Embeddings for Long Term Disease Prediction"](#) ⬡ Github

- **Kapila, N.**, Glattki, J., & Rathi, T. (December 2024). ["CNNtention: Can CNNs do better with Attention?"](#) arXiv:2412.11657 [cs.CV]. ⬡ Github

- **Kapila, N.** (July 2024). ["Training LSTMs on Building Genome 2 Data."](#) ⬡ Github

Open Source work

The list below may be out of date. Click for [Updated list of projects](#) and [Open Source Contributions](#).

Project	Type	Contribution
skore the scikit-learn sidekick	Open Source Contribution	Added new features for `train_test_split`, documentation and test cases.
mlrose-ky Random optimization library used in Georgia Tech's Machine Learning class	Open Source Contribution	Added new features such as ability to parallelize experimentation, bug fixes, better documentation to help students understand how to conduct experiments
biscuit code editor in python	Open Source Contribution	Added relative line numbering as a part of `Hacktoberfest 2024`.
mcp-local-rag Model Context Protocol (MCP) server listed on `MCP servers official repo`	Open Source Project	"primitive" RAG-like web search "model context protocol (MCP)" server that runs locally. ✨ no APIs ✨
mcp-meme-sticky Model Context Protocol (MCP) server listed on `MCP servers official repo`	Open Source Project	Create AI generated memes using MCP Meme Sticky. Can converted generated memes into stickers for Telegram or WhatsApp (WA coming soon). ✨ no APIs required ✨

Skills

Languages: Python, C, C++, MATLAB.

Frameworks: Experienced with PyTorch, ScikitLearn, NumPy/Numba, Pandas/Polars, Captum, Skorch, MLFlow, FastAPI, etc.

Tools: HuggingFace, GitHub, Git VCS, Docker, GitHub CI/CD, DIALux, AutoCAD.

Research and Development: Academic Research, Lit Review, Market Review, Technical Documentation, Experiment Design, Data Pipeline Implementation.

Soft Skills: Collaboration in Cross-Functional Teams, Technical Communication, Problem-Solving, Project Management.

Certifications – Listing Recent 3 Only

Up to date list can be viewed on my LinkedIn.

- **Fundamentals of Deep Learning**, Nvidia (https://learn.nvidia.com/certificates?id=0x3zAbT6TfilxUwD_kMgaA) 2024
- **Machine Learning with Python**, IBM (https://www.credly.com/badges/88522d33-bcf6-4aca-ae8c-21a58a68a594/print) 2024
- **Machine Learning Foundations: A Case Study Approach**, University of Washington (https://www.coursera.org/account/accomplishments/verify/W6DPNVH4V88P) 2024

References

Can be viewed on LinkedIn.