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

Batch of Fall 2025

Master of Science in Computer Science - Artificial Intelligence (OMSCS Program)

Atlanta, GA

- Current GPA: 4.00 / 4.00
- AI relevant coursework: Machine Learning, Deep Learning, Natural Lang Processing, Research Work, Big Data for Health

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

WORK EXPERIENCE

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

Remote (Atlanta, GA)

- Georgia Institute of Technology
- Graduate researcher, a part of the <u>Human-Augmented Analytics Group</u>.
 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

Finland

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) <u>"FarSightBERT: Enhancing Embeddings for Long Term Disease Prediction"</u>

 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." G Github

VOLUNTEER WORK

• Unofficial TA for Georgia Tech's Machine Learning class. Maintaining mlrose-ky library and documentation used in the class.

• OMSCS UAE Chapterhead: created the UAE chapter and grew it to ~40 people from a group of 3.

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 required.
mcp-meme-sticky Model Context Protocol (MCP) server listed on MCP servers official repo	Open Source Project	Create AI generated memes and convert them into stickers for Telegram or What- sApp. No APIs required.

SKILLS

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

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.

HACKATHON AND TALKS

- Won 2nd place at AI Tinkerers Dubai Hackathon May 2025 Powered by Couchbase!
- Gave a talk on my MCP server projects at AI Tinkerers Dubai Meetup June 2025 Demo Day

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)
- 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.