

NELOY PRAMANIK SUPTO

CSE Graduate | Data / ML Engineering & Network Engineering | Junior Technical Roles

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PROFESSIONAL SUMMARY

Versatile Computer Science and Engineering graduate with dual strengths in applied machine learning / data analytics and enterprise networking. Experienced in building end-to-end ML pipelines in Python (scikit-learn, TensorFlow, XGBoost, LightGBM) with deployment via FastAPI, Docker, and AWS, and author of a peer-reviewed applied-ML conference paper. Equally comfortable designing and configuring enterprise networks, holding CCNA (Cisco) and MTCNA (MikroTik) certifications with hands-on OSPF, VLAN, NAT, ACL, and VRRP experience in EVE-NG and Packet Tracer. Suited to junior data/ML engineering, data analyst, or IT / network infrastructure roles.

TECHNICAL SKILLS

Programming & Data: Python, SQL, Pandas, NumPy, C (basic)

Machine Learning & AI: Scikit-learn, TensorFlow, Keras, XGBoost, LightGBM, Deep Learning (CNN, LSTM), NLP, SHAP, LIME

Data Analytics & Visualization: Data Cleaning & Validation, Feature Engineering, EDA, Power BI, Excel, Matplotlib

Networking: CCNA, MTCNA, Cisco IOS, MikroTik RouterOS v7, Routing & Switching, OSPF, VLAN, Inter-VLAN, DHCP, NAT, ACL, VRRP, SSH, Syslog, NTP

Deployment & Tools: FastAPI, Docker, AWS (EC2, ECR), GitHub Actions (CI/CD), MongoDB, Git/GitHub, Linux

Simulation & Emulation: EVE-NG, Cisco Packet Tracer, VirtualBox / VMware, Jupyter Notebook

SELECTED PROJECTS

Sleep Health Prediction System — End-to-End ML Pipeline

Python, scikit-learn, FastAPI, MongoDB, Docker, AWS, GitHub Actions · [GitHub](#)

- Built a complete ML system predicting sleep-related health conditions from a self-collected dataset, covering ingestion, validation, feature engineering, training, and prediction.
- Deployed as a FastAPI service, containerized with Docker, and automated deployment to AWS EC2 via ECR and GitHub Actions CI/CD.

Enterprise Multi-Branch Network with High Availability

MikroTik RouterOS v7, EVE-NG, OSPF, VLAN, VRRP, NAT, Firewall · [GitHub](#)

- Designed a simulated multi-site enterprise network with OSPF multi-area routing, 802.1Q VLANs, inter-VLAN routing, centralized DHCP, and source NAT in EVE-NG.
- Implemented VRRP gateway high availability, stateful firewall ACLs for zero-trust segmentation, SSHv2 hardening, centralized Syslog, and NTP synchronization.

Agro-Climatic Data Reconstruction with Machine Learning (BD-AgroClim)

Python, XGBoost, LightGBM, SHAP, Pandas, NumPy · [GitHub](#)

- Built a residual-learning bias-correction framework for reanalysis climate data using tree-based ensembles, reducing temperature RMSE from ~2.25°C to ~1.36°C under leave-one-station-out validation.
- Interpreted model behavior with SHAP and validated spatial transferability on held-out stations.

Geo-Business Data Collection Pipeline

Node.js, Playwright, JavaScript, CSV processing · [GitHub](#)

- Developed a modular web-data pipeline validated on 10,000+ business records with parallel scraping, duplicate removal, and CSV export at ~98% address extraction accuracy.

RESEARCH & PUBLICATIONS

- Supto, N. P., Chowdhury, R., Rahman, M. *Addressing Behavioral Patterns of Late Sleepers Using a Supervised Learning Approach*. IDAA 2025, Atlantis Press, pp. 341–357, 2026. DOI: 10.2991/978-94-6239-664-7_24. (Published.)
- Supto, N. P., et al. *Hybrid CNN–LSTM Framework for Long-Term Solar Irradiance Prediction over Bangladesh*. SSRN, 2025. DOI: 10.2139/ssrn.5928559. (Preprint.)
- Supto, N. P. *An Explainable Machine Learning Framework for Personalized Sleep Health Assessment*. SSRN, 2025. DOI: 10.2139/ssrn.5936725. (Preprint.)
- Two additional manuscripts under review: agro-climatic ML bias correction (LightGBM, LOSO, SHAP) and Bengali NLP with explainable AI (BanglaBERT vs. mBERT).

EXPERIENCE

Data Engineering Associate (Data Operations & Analytics)
Red Digital Marketing Group · Part-time · Remote, Dhaka, Bangladesh

Mar 2026 – Present

- Conduct data acquisition, cleaning, transformation, and validation, converting raw data into structured, analysis-ready datasets with quality-control checks for marketing analytics.

EDUCATION

B.Sc. in Computer Science and Engineering (CSE)
Daffodil International University, Dhaka, Bangladesh · CGPA: 3.60 / 4.00

2021 – 2025

- Relevant coursework: Data Mining & Machine Learning, Artificial Intelligence, NLP, Computer Networks, Data Communication, DBMS, Statistics & Probability.

CERTIFICATIONS

- CCNA (Cisco) & MTCNA (MikroTik) — Creative IT Institute (Grade A, 2025) — Certificate ID: CMTCNA-25010205
- Machine Learning Using Python (2026) — Certificate Code: 9686515
- Introduction to Data Engineering — IBM / Coursera (2026) — Certificate ID: WDYVTAPD8EYC
- Data Analytics with Excel, Power BI, Python & SQL — Tutorials Point BD (2026) — Certificate ID: 26925b25c5ae5683
- Networking Basics, Network Defense, Ethical Hacker — Cisco Networking Academy
- Python Essentials 2 — Python Institute;
- Linux Essentials — NDG/LPI;
- AI Fundamentals — IBM SkillsBuild