Md. Nahin Alam

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PROFESSIONAL SUMMARY

High-performance **AI Engineer & Full-Stack Developer** with a Summa Cum Laude CS degree. Expert in deploying scalable cloud infrastructure (AWS/GCP), engineering ML pipelines (PyTorch, LLMs), and building production-grade web applications (Next.js, Node.js). Proven ability to reduce deployment cycles by 40% and automate complex workflows. Active researcher with high-impact submissions to top-tier AI venues (NeurIPS, ICDE).

TECHNICAL ARSENAL

- **Core Stack:** Python, TypeScript, JavaScript (ES6+), C++, SQL (PostgreSQL), Java.
- **AI & ML Ops:** PyTorch, TensorFlow, Hugging Face, LangChain, RAG Pipelines, Vision-Language Models (CLIP).
- **Web Engineering:** Next.js (14/15), React 19, Node.js, Express, Prisma ORM, Tailwind CSS, Docker.
- **Cloud & DevOps:** AWS (EC2, S3), GCP, Kubernetes (K8s), CI/CD (GitHub Actions), Firebase.

EXPERIENCE

Technical Specialist (Cloud & DevOps) *Dhaka, Bangladesh*
The Data Island *Jun 2024 – Oct 2025*

- **Infrastructure Optimization:** Architected high-availability cloud solutions on AWS/GCP, ensuring 99.9% uptime for data services.
- **Containerization:** Migrated legacy applications to Docker microservices orchestrated via Kubernetes, improving scalability.
- **Process Automation:** Engineered robust CI/CD pipelines that reduced release deployment time by **40%**.
- **Database Tuning:** Optimized PostgreSQL schemas and REST API query performance for high-throughput data access.

Research Assistant (Multimodal AI) *Remote / Boulder, CO*
University of Colorado Boulder (Centre for UntieAI) *Jan 2025 – Present*

- **ML Engineering:** Developing automated ETL pipelines to process terabyte-scale medical imaging datasets for model training.
- **Model Optimization:** Benchmarking Vision-Language Models (VLMs) to identify architectural bottlenecks; insights under review at **NeurIPS**.

Research Engineer & Lab Instructor *Dhaka, Bangladesh*
North South University *Jun 2024 – Present*

- **Product Development:** Led engineering for *RadMultiBench*, a comprehensive benchmarking suite for Radiology AI models.
- **Algorithm Design:** Implemented consensus feature selection pipelines using XGBoost/LightGBM, enhancing biomarker discovery accuracy.
- **Technical Leadership:** Mentoring 50+ students in AI/ML labs; translating complex theoretical concepts into deployable code exercises.

KEY PROJECTS

RBAC & Enterprise Admin System | *PERN Stack, TypeScript, Docker, Redis* **View Project**

- Built a secure enterprise management platform featuring granular **Role-Based Access Control (RBAC)** and JWT authentication.
- Engineered a strict MVC backend with **Prisma ORM** and Redis caching to handle concurrent administrative tasks.

CodePrep | **Algo Practice Platform** | *Next.js 14, Supabase, Server Actions* **View Project**

- Developed a full-stack interview platform with a secure **Remote Code Execution (RCE)** sandbox for real-time compilation.
- Implemented Row Level Security (RLS) via Supabase to ensure tenant data isolation and compliance.

Chronicle Creators | **AI Video Pipeline** | *Python, Gradio, LLMs, FFmpeg* **View Project**

- Automating video production by integrating **LLMs (Groq)** for scripting and FFmpeg for dynamic media assembly.
- Deployed as a scalable Gradio app, reducing video content creation time by approx. **90%**.

EDUCATION & ACHIEVEMENTS

B.Sc. in Computer Science and Engineering   *Summa Cum Laude (Top 1%)*
North South University   *Jan 2020 – Apr 2024*

- **Select Research:** 5 papers submitted at high-impact venues including ICDE, NeurIPS Workshop, and ACL.
- **Certifications:** Deep Learning Specialization (Andrew Ng), GCP Fundamentals, FastAI.