Nithin Ram Kalava

hello@nithinram.me | linkedin.com/in/nithinramkalava | github.com/nithinramkalava | nithinram.me

EDUCATION

Vasireddy Venkatadri Institute of Technology (VVIT) — Guntur, Andhra Pradesh
Bachelor of Technology in Computer Science & Engineering (CGPA: 8.28/10.0) — *Dec. 2021 – Jun. 2025*

PROJECTS

PC Building Assistant Platform | *Python, Next.js, React, PostgreSQL, LLM, REST APIs, ETL*
- Engineered a complex full-stack AI system with a **Python/ML** backend for intelligent component recommendations and a **PostgreSQL** knowledge base utilizing **PL/pgSQL** for intricate compatibility rule enforcement.
- Implemented a comprehensive **ETL data pipeline** involving web scraping, data cleaning with Pandas, and transformation to populate the database with over 5000 component entries.
- Developed a dual-interface frontend (conversational **LLM** & expert builder) using **Next.js/React** and integrated services via **REST APIs**. **Hosted live.**

Post-Quantum Cryptography Library ('pqc') & 'PQC-Vizz' Tool | *JavaScript, NPM, Algorithms*
- Developed and published a high-performance, pure **JavaScript** NPM library implementing complex **NIST PQC standards**, demonstrating deep algorithmic problem-solving and security awareness.
- Achieved significant developer adoption with **1900+ downloads** and performance of ¿2300 ops/sec (ML-KEM).
- Built an accompanying interactive **React/Next.js** visualization tool to demystify advanced cryptographic concepts. **Hosted live.**

CareerPath Navigator | *TypeScript, Next.js, React, CI/CD, Vercel*
- Architected and built a user-centric, full-stack educational platform with a focus on performance and accessibility.
- Implemented recommendation algorithms and deployed the application via an automated **CI/CD** pipeline on Vercel.

Math Minute | *Java, Android SDK, SQLite*
- Developed a native Android application using **Java** and strong **OOP** principles for educational math practice.
- Implemented adaptive difficulty algorithms and managed local user data persistence with an SQLite database.

TECHNICAL SKILLS

Languages: Python, Java, JavaScript, TypeScript, SQL, C/C++, PL/pgSQL
Technologies: AI/ML, Deep Learning, NLP, LLM Integration, Full-Stack Development, REST APIs, Data Engineering, ETL
Frameworks & Libraries: React, Next.js, Scikit-learn, Pandas, NumPy, TensorFlow, PyTorch, Node.js
Databases: PostgreSQL, MySQL, SQLite, MongoDB (Basics)
Tools & Platforms: Git, Docker, AWS, Google Cloud Platform (GCP), Vercel (CI/CD), Linux

CERTIFICATIONS

AI & ML: IBM AI Developer & AI Engineering; DeepLearning.AI (Deep Learning, ML, NLP, TensorFlow).
Cloud: AWS Academy Graduate (Data Eng, ML, Architecting); Google Cloud (Foundations, 30+ Badges in Vertex AI/GenAI).
Core SWE: HackerRank (Problem Solving, SQL); freeCodeCamp (Python, Backend APIs); Meta (React).

ACTIVITIES & EXPERIENCE

Coding Club Lead Member: Organized technical workshops (Python, Java, DSA) and mentored peers.
Home Lab Management: Hands-on experience with Linux (Debian), server setup, networking, and database administration (PostgreSQL).