DEV MEHROTRA

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EDUCATION

- **National Institute of Technology, Silchar** — Assam, India
  Bachelor of Technology - Computer Science and Engineering; CGPA: 9.29 — *(Nov 2022 - May 2026)*
- **Dr. Virendra Swarup Public School Cantt, Kanpur** — Kanpur, India
  Class 12 (ISC); Percentage: 98.25 — *(Mar 2021 - Apr 2022)*
- **Dr. Virendra Swarup Public School Cantt, Kanpur** — Kanpur, India
  Class 10 (ICSE); Percentage: 97 — *(Mar 2019 - May 2020)*

WORK EXPERIENCE

- **Cloud Ambassadors - Machine Learning Engineer Intern** *(Dec 2024 - Present)*
  - Automated **Thumbnail Generation** using **Gemini 2.0** and Next.js, cutting down manual design work by 80% through Generative AI and image post-processing. Built a Conversational AI agent using **Dialogflow** CX and **FastAPI**, integrated with WhatsApp via **Meta Cloud API**, automating 70% of **multilingual** support queries.
  - Devised an end-to-end Financial Analysis pipeline by ingesting ACE Equity data, processing it through a **Text Embedding** API, and indexing with **Vertex AI Vector Search** for real-time **semantic** querying. Merged multi-agent **LangChain** with robust GCP services including **BigQuery**, enabling 40% faster AI driven insights.
  - Refactored **Podcastify's** ML pipelines, significantly reducing **audio** processing time by 25% through optimized data flow. Deployed **Cloud-native** applications using Cloud Run, **Docker**, and Google Cloud Storage.

PROJECTS

- **TrackNow - Advanced Realtime Event Tracking** [Github](#)
  - Designed a **Geolocation** platform for Volunteer Monitoring at large-scale college events, architecting **Isolated** virtual rooms with SocketIO to enable messaging among connected users reducing coordination delays by 1 min.
  - Implemented **Redis Pub/Sub** and **Apache Kafka** for fault-tolerant, horizontally scalable GPS data streaming with sub-second latency, ensuring **4×** reliability under peak loads, secured via **JWT** for 100% stateless sessions.
  - Integrated **Geofencing** with **PostGIS** for precise spatial filtering and dispatch automation, triggering real-time alerts on zone breaches of users, and built a dynamic **Leaflet.js** UI featuring vivid **Heatmaps**, proximity based **Clustering**, and interactive **Distance Tools** between each participant, boosting monitoring efficiency by 45%.
  - Technologies and Tools - HTML5, CSS3, JavaScript, Node.js, Express.js, MongoDB, PostgreSQL.

- **Edumate - Automate Assessments** [Github](#)
  - Developed a website for **NGO** VOPA to automate literacy and numeracy assessments through proficiency-based levels reducing teacher workload by 75%. Displays in-depth performance analytics leveraging data visualization.
  - Applied **OCR** for digitizing handwritten responses and **Speech-to-Text** processing for pronunciation analysis, achieving 95% accuracy in **multimodal** evaluation and enabling actionable insights on student **progress**.
  - Technologies and Tools - React, Tailwind CSS, JavaScript, Node.js, Express.js, Python, MySQL, Axios, Chart.js

SKILLS

- **Programming Languages**: Java, C++, C, Python, Kotlin, HTML, CSS, JavaScript
- **Frameworks & Libraries**: React, Node.js, Express.js, Jetpack Compose, FastAPI, Scikit-learn, Pandas, TensorFlow, Keras
- **Tools & Databases**: Linux, MySQL, PostgreSQL, MongoDB, Firebase, Git, Docker, Cloud Run, Vertex AI, RESTful APIs
- **CS Fundamentals**: OOP, Operating Systems, Computer Networking, Data Structures & Algorithms

POSITION OF RESPONSIBILITY

- **Google Developer Group on Campus (GDGC) , NIT Silchar**
  Designation (Android Moderator) — *(Aug 2023 - Present)*
  - Collaborated in a **Team Project** to streamline **Food Order Management** for local hostel canteens of our college by developing a centralized and real-time food delivery app, enhancing operational efficiency by 50%. Technologies and Tools - Kotlin, Firebase, MVVM, XML, Retrofit, Figma for UI/UX design. [User](#) [Admin](#)
  - Organized and conducted a three-day **Android Study Jams** workshop attended by over **100** students.

- **E-CELL , NIT Silchar**
  Designation (President) — *(Jul 2023 - Present)*
  - Led a team of **110+** members in conducting various **Entrepreneurship** events and **Smart India** Hackathon.
  - Represented the college team in the National Entrepreneurship Challenge (NEC) Finals held at IIT Bombay.

ACHIEVEMENTS

- Shortlisted among the top **1%** for the **Code For Good Hackathon** by JP Morgan Chase - June 2024
- Solved **1000+** DSA problems across various platforms - [GFG](#), [Leetcode](#), [Coding Ninja](#), [Codeforces](#)