

RA LAN DO TU TRINH

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PROFESSIONAL SUMMARY

Data Science student and **NASA Space Apps Finalist** with a strong focus on **Software Engineering**. Core Founder and Infrastructure Lead for international startup projects. Proven ability to design scalable **Data Pipelines** and implement complex **Backend Logic** via SQL and C++. Highly motivated to bridge the gap between academic research and Professional Engineering.

EDUCATION

VNU-HCM University of Science <i>Bachelor of Data Science</i>	2024 – Present GPA: 3.72 / 4.0
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TECHNICAL SKILLS

- **Programming:** SQL (Complex Logic/CTEs), C/C++ (Structs & Pointers), JavaScript (ES6+), Python.
- **Data & AI:** PyTorch, LSTM, GRU, Time-series Analysis, Explainable AI (SHAP/LIME).
- **Tech Exposure:** Docker (Containerization), Azure Static Web Apps, Git, GitHub.
- **Geospatial:** ArcGIS, QGIS, Satellite Remote Sensing, InSAR Data Processing.

PROJECTS & EXPERIENCE

Gratus (Stealth Mode Startup) <i>Core Founder & Data Infrastructure Lead (International Project)</i>	Jan 2025 – Present
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- Architecting scalable data systems for an **automated IoT thermal sensor system**.
- Developing robust **Data Pipelines** to process real-time streams using Python and SQL.
- Implementing **Clean Code** principles and architecture to ensure high availability and scalability.

Multi-modal Sinkhole Early Warning System <i>Lead Researcher (Independent)</i>	2024 – Present
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- Developing a Multi-modal AI pipeline integrating satellite telemetry and hydrologic temporal data.
- Implementing **LSTM/GRU architectures** for 72-hour and sub-seasonal hazard forecasting.
- Utilizing **XAI (SHAP/LIME)** to ensure the model's physical consistency with geological principles.

NASA Space Apps Challenge <i>Top 10 Finalist (Local Event) Project: ContinuedFlow</i>	2024
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- Built a weather intelligence platform by architecting real-time pipelines for **NASA POWER APIs**.
- Optimized automated data normalization workflows to handle large-scale atmospheric telemetry.

LMS Backend Logic Design <i>SQL Developer Project: HackerRank x Dua Data</i>	2025
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- Developed complex SQL logic using **CTEs** to automate evaluation for a 10-day coding challenge.
- Transformed raw interaction logs into structured business insights and identified retention bottlenecks.

Library Management System <i>C++ Developer Honor-based Assignment</i>	2024
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- Granted a **final exam exemption** due to outstanding C++ architecture.
- Developed a CLI system using Structured Programming and persistent storage via **File I/O**.

LEADERSHIP & ACTIVITIES

Mathematics Club VNU-HCMUS <i>Vice President</i>	2025 – Present
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- Coordinating technical workshops and logic sessions for over **100+ students**.