

ABHINANDHAN VELAGAPUDI

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EDUCATION

- **Indiana University – Luddy School of Informatics, Indianapolis, IN**
Master of Science in Applied Data Science – May 2025
Specializations: Data Analytics, Data Engineering, Deep Learning, Cloud Computing, Data Visualization, Web Database Development
- **Vel Tech University, Chennai, India**
Bachelor of Technology in Computer Science (Specialization: Data Analytics) – June 2023

TECHNICAL SKILLS

- **Programming Languages:** Python, R, SQL, PHP, HTML, JavaScript
- **Tools & Platforms:** Tableau, Power BI, Jupyter, Git, PhpMyAdmin, Databricks, AWS, MongoDB, Spark, TensorFlow, PyTorch, Airflow
- **Data Engineering Skills:** ETL Pipeline Development, Data Modeling, Workflow Automation, Data Wrangling, Batch Processing
- **Data Analytics Skills:** Exploratory Data Analysis, Statistical Modeling, Business Intelligence, A/B Testing, Reporting
- **Web & Database Skills:** MySQL, Web Development, 3-Tier Architecture, Leaflet.js, OpenStreetMap

Soft Skills: Project Management, Problem-Solving, Communication, Team Leadership, Critical Thinking.

WORK EXPERIENCE

COMET Lab | Project Leader, Data Engineer & Analyst

Indiana University, Indianapolis | Jan 2024 – May 2025 (Graduated May 2025)

- Built end-to-end ETL pipelines for historical records using Python and SQL, processing 100k+ entries into a structured MySQL database.
- Developed a geospatial mapping system with Leaflet.js and OpenStreetMap, enabling access to 275+ historical home locations.
- Optimized data workflows, reducing manual entry errors by 30% and improving backend query performance.
- Developed visualizations and analyzed data for 3+ lab projects using Python and Tableau.

Graduate Research Assistant, Indiana University, Indianapolis | Aug 2023 – Dec 2023

- Completed 4 industry-aligned virtual internships on Forage, focusing on data analytics, AI, Agile, and project management.
- Supported 100+ students' career growth by contributing to professional learning module design.

PROJECTS

BrewShop: Online Coffee Marketplace – PHP, MySQL, HTML/CSS, JS *Feb 2025 – Apr 2025*

- Engineered a 3-tier online marketplace supporting 50+ product entries and real-time order tracking for customers and admins.

Instacart Market Basket Analysis – PySpark, SparkSQL *Aug 2024 – Dec 2024*

- Processed over 3 million orders to generate product recommendations and forecast demand trends with >85% model accuracy.
- Identified top product pairs using market basket analysis (lift > 1.5, confidence > 0.2).

New York Airbnb Data Visualization Dashboard – Plotly, Dash *Aug 2024 – Dec 2024*

- Designed a dashboard with filters for 5+ attributes, revealing pricing trends across 10+ neighborhoods, improving host decision-making.

Building Footprint Extraction Using Deep Learning *Jan 2024 – Apr 2024*

- Applied deep learning for satellite image segmentation to extract building outlines; Achieved >80% IoU score using ResNet/SkyNet models to detect urban structures in satellite imagery.

Academic Research Repository (Database Design Project) – MySQL, ERD *Aug 2023 – Nov 2023*

- Developed a 20-table relational database in 3NF; formulated an ER diagram and schema to support research publication management.

Multi-Disease Prediction Using Machine Learning (Bachelor's Capstone Project) *May 2023*

- Achieved 91.87% prediction accuracy on medical datasets using Random Forest and Naïve Bayes classifiers.