

Indumathi Thamizharasan

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SUMMARY

Software Engineer and MS graduate in Computer Science and Engineering (AI/ML) from the University at Buffalo with 2+ years of experience in data engineering, backend systems, and applied machine learning. Experienced in building scalable ETL pipelines, cloud-native data platforms, and AI-driven systems using Python and SQL. Proven ability to deliver end-to-end solutions and collaborate effectively across cross-functional teams.

EDUCATION

University at Buffalo <i>Master of Science in Computer Science and Engineering(AI/ML)</i>	Buffalo, New York Aug. 2024 – Dec. 2025
Sathyabama Institute of Science and Technology <i>Bachelor of Engineering in Computer Science</i>	Chennai, India Aug. 2018 – Sep 2022

EXPERIENCE

Accenture <i>Data Engineering Analyst</i>	Mar 2024 – Aug 2024 Chennai, India
<ul style="list-style-type: none">Designed and optimized BigQuery stored procedures and complex SQL queries to support analytical workloads and improve performance.Automated and monitored Talend ETL pipelines using Atomic Scheduler, improving reliability and reducing manual effort.Performed data validation, quality checks, and production issue troubleshooting to ensure accuracy of downstream analytics.	
Accenture <i>Data Engineering Associate</i>	Aug 2022 – Feb 2024 Bengaluru, India
<ul style="list-style-type: none">Built and supported data ingestion pipelines on Google Cloud Platform, loading enterprise data into BigQuery.Developed Python preprocessing scripts to transform non-CSV source files into BigQuery-compatible formats.Performed SQL development and validation using DBeaver and maintained data ingestion documentation.	

PROJECTS

AI-Powered Elder Care Monitoring System	Jan 2024 – May 2024
<ul style="list-style-type: none">Tech: Python, PyTorch, OpenCV, Pose Estimation, ResNet18, LSTM.Built an end-to-end computer vision and deep learning pipeline for real-time activity recognition and fall detection.Trained a ResNet18 + LSTM temporal model and evaluated performance using precision, recall, and F1-score.	
Student Budget & Expense Management System	Jan 2024 – May 2024
<ul style="list-style-type: none">Tech: SQL, Relational Database Design, BCNF, Stored Procedures.Designed a normalized relational schema to manage student budgets, expenses, and savings.Implemented stored procedures and complex SQL queries for automated financial reporting and spending analysis.	
LLM-Based Document Summarization System	Feb 2024
<ul style="list-style-type: none">Tech: Python, HuggingFace, Transformers, BART, NLP.Developed a modular LLM-based abstractive summarization pipeline for long-form documents.Fine-tuned and evaluated models using an iterative workflow with ROUGE metrics and qualitative error analysis.	

TECHNICAL SKILLS

Programming & Scripting: Python, SQL, JavaScript, Java, C/C++
Data Engineering & Databases: Google BigQuery, MySQL, PostgreSQL, ETL Pipelines, Data Ingestion, Stored Procedures, Data Validation, Data Quality Checks
AI & Machine Learning: PyTorch, Computer Vision, NLP, LSTM, ResNet, BART, RAG Fundamentals, Tensorflow
Frontend & Backend Technologies: HTML5, CSS3, Vue.js (basic), RESTful APIs, React Native
Cloud, DevOps & Version Control: Google Cloud Platform (GCS), AWS (basic exposure), Git, CI/CD Pipelines
Tools & Platforms: DBeaver, Postman, Atomic Scheduler, Jupyter Notebook, Power BI
Certifications: Google Cloud Digital Leader