

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

Master of Science in Computer Science and Engineering(AI/ML)

Sathyabama Institute of Science and Technology

Bachelor of Engineering in Computer Science

Buffalo, New York

Aug. 2024 – Dec. 2025

Chennai, India

Aug. 2018 – Sep 2022

EXPERIENCE

Accenture

Data Engineering Analyst

- Designed and optimized **BigQuery** stored procedures and complex **SQL** queries to support analytical workloads and improve performance.
- Automated and monitored **Talend ETL** pipelines using **Automic Scheduler**, improving reliability and reducing manual effort.
- Performed **data validation, quality checks, and production issue troubleshooting** to ensure accuracy of downstream analytics.

Mar 2024 – Aug 2024

Chennai, India

Accenture

Data Engineering Associate

- 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.

Aug 2022 – Feb 2024

Bengaluru, India

PROJECTS

AI-Powered Elder Care Monitoring System

- **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.

Jan 2024 – May 2024

Student Budget & Expense Management System

- **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.

Jan 2024 – May 2024

LLM-Based Document Summarization System

- **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.

Feb 2024

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, Automic Scheduler, Jupyter Notebook, Power BI

Certifications: Google Cloud Digital Leader