

# VAMSHI KRISHNA MADHAVAN

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## Skills

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- **Programming Languages:** Python, Java, C, SQL, PHP, JSP
- **Frameworks and Libraries:** Spring Boot, Spring Batch, Spring Data JPA, Flask, Streamlit, GraphQL, REST API, Apache Spark, PySpark, Kafka, TensorFlow, Keras, PyTorch, scikit-learn, Pandas, NumPy
- **Cloud & DevOps:** AWS (S3, EC2, ECS, Lambda, DynamoDB, RDS, CloudWatch, Kubernetes), Docker, CI/CD Pipelines, Jenkins, Git, Bitbucket
- **Databases & Caching:** MySQL, PostgreSQL, Redis, Memcache, Ehcache
- **Big Data & Orchestration:** Apache Airflow, Distributed Systems, Cloud-Native Microservices, ETL Pipelines, Scalable API Development, Data Pipelines
- **Tools:** JIRA, Agile Methodologies

## Experience

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**Software Engineer**, Experian – Hyderabad, India April 2021 – January 2024

- Spearheaded the Verification Batch project, producing Verification Reports to enterprise clients and boosting application TPS by 700% through design and implementation of a Batch Microservice powered by Spring Boot, Spring Batch, and AWS services (S3, EC2, ECS).
- Led a team of 6 engineers to execute migration of a Batch-Based Microservice to Big Data architecture, achieving a 10x performance improvement. Initiated and developed a proof of concept for the Big Data architecture, was adopted as foundation for final implementation. Orchestrated the CensusHub project, a secure data warehouse processing millions of records daily using Java, Spring Framework, Airflow, Redis, and AWS services (S3, EC2, EMR).

**Software Engineer Intern**, Cognitree – Bangalore, India December 2020 – April 2021

- Gained in-depth knowledge of the Software Development Life Cycle and High-Level Design through hands-on experience with various frameworks, libraries, and APIs.

## Projects

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- **VocalVerse** | *Python, NLP*: Developed a PyPI package for text translation, speech synthesis, and audio transcription using OpenAI Whisper and Google Text-to-Speech.
- **Multilingual AI Chatbot** | *Python, NLP, ML*: Built a polyglot chatbot with LLaMA3 and OpenAI for text, voice interactions.
- **Time-Series Mining for Agriculture** | *Python, ML*: Designed an Active Learning framework for analyzing seasonal time-series data, enhancing crop monitoring.
- **URL Shortener Service** | *Spring Boot, Ehcache, MySQL*: Created a distributed URL shortener with efficient caching.

## Education

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**University of Houston**, Master of Science in Data Science May 2025

- GPA: 3.76/4.0 | Relevant Coursework: Machine Learning, NLP, Data Science, Data Mining, Data Visualization, Data Engineering, Database Management

**Malla Reddy Engineering College**, Bachelor of Technology in Computer Science July 2021

- GPA: 9.36/10.0 | Relevant Coursework: Algorithms, Data Structures, Operating Systems, Databases, Machine Learning, Computer Networks, Software Engineering

## Certifications & Achievements

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- AWS Certified Solutions Architect – Associate (Amazon Web Services), June 2024; Google Cloud Specialization: Architecting with Google Compute Engine.
- Certified in Java, Python, and Apache Airflow (HackerRank, Udemy) and in C and Data Structures (QEEE by IIT-Madras).
- Semi-Finalist in TechGig Code Gladiators 2020 (Top 0.1%, outperforming 250k participants).
- Open-source contributor during HacktoberFest (2019, 2022) and completed virtual experiences with JP Morgan and Goldman Sachs.
- Recognized with the Experian Spot Award for driving impactful outcomes and collaboration with product stakeholders.