

# Venu Siddapura Govindaraju

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## SUMMARY

AI Researcher and Data Engineer with over 4 years of IT experience in developing scalable machine learning solutions and cloud-based data pipelines. Experienced in end-to-end model development, deployment, and delivering data-driven insights through collaborative research and engineering projects.

## SKILLS

Programming & Frameworks	Python, SQL, R, PySpark, TensorFlow, PyTorch, Scikit-learn, NumPy, Pandas, OpenCV
Machine Learning & Deep Learning	Supervised and Unsupervised Learning, CNNs, Transfer Learning, Multimodal Learning, Adversarial Training, Model Evaluation
Natural Language Processing & LLMs	Large Language Models (LLMs), Prompt Engineering, Zero-shot & Few-shot Learning, Sentiment Analysis, Conversational AI, Chatbot Evaluation Metrics
Data Engineering & ETL	Azure Data Factory, Azure Synapse Analytics, Azure Databricks, Apache Airflow, SSIS, Talend, Data Modeling, ETL Automation
Cloud & DevOps	Microsoft Azure (Synapse, Data Lake, Event Hub, Azure ML), AWS (S3, Redshift, Glue), GCP (BigQuery, Dataflow), Docker, Kubernetes, GitHub Actions, Jenkins, CI/CD Pipelines
Visualization & Databases	Power BI, Tableau, PostgreSQL, MySQL, MongoDB, Cassandra, Azure SQL, Dimensional Modeling, Star/Snowflake Schema Design
Responsible AI & Research	AI Ethics, Privacy & Fairness, Regulatory Compliance, Human-Centered AI, User Studies, Quantitative Evaluation, Experimental Design
Tools & Collaboration	Git, Linux, Jupyter, VS Code, Technical Documentation, Research Communication, Cross-functional Teamwork, Project Presentation

## WORK EXPERIENCE

**AI Researcher — University of Naples Federico II, Naples, Italy** Dec 2024 – Nov 2025

- Worked as part of the university’s AI research team focusing on biometric security, multimodal authentication, and adversarial robustness in deep learning.
- Led and contributed to international research projects including: LivDet 2025 – Fingerprint Liveness Detection and BIOVID 2025 – Lip–Audio Authentication.
- Collaborated with multidisciplinary teams of AI researchers, data scientists, and engineers to design and deploy scalable deep-learning systems on Azure cloud with CI/CD pipelines using Docker and GitHub Actions.
- Responsible for model development, experimentation, and end-to-end pipeline integration covering data preparation, training, evaluation, and deployment.
- Presented the BIOVID Lip–Audio Authentication project at the ICIAP 2025 Conference and achieved **2<sup>nd</sup> place globally** in the BIOVID Challenge, receiving recognition for technical excellence and project delivery.

- Co-authored a peer-reviewed Springer book chapter titled “*Multimodal Biometric Authentication Using Lip Motion and Spoken Passphrases*” (2026), published as part of an international research collaboration. DOI: [10.1007/978-3-032-11381-8\\_45](https://doi.org/10.1007/978-3-032-11381-8_45).

### **AI Chatbot Developer (Internship) — Fiven, Remote**

Jan 2024 – Dec 2024

- Worked as an AI Chatbot Developer on the project “*Real-World Chatbot Performance Measurement and Self-Training*”, focusing on LLM-based customer support systems.
- Contributed to research, development, and evaluation of conversational AI solutions, collaborating with multidisciplinary teams of AI researchers and engineers.
- Designed, developed, and tested chatbot pipelines using Python, applying prompt engineering, zero-shot learning, sentiment analysis, and conversational style adaptation.
- Implemented quantitative evaluation methodologies based on Natural Language Processing (NLP) metrics to assess chatbot quality, personalization, readability, and response complexity.
- Conducted user studies with real users to validate chatbot performance in real-world application scenarios.
- Contributed to analyses on ethical, regulatory, and responsible AI aspects, with particular attention to privacy, fairness, and regulatory compliance.
- Demonstrated strong autonomy, reliability, and professionalism, delivering complete technical documentation and the final project report within agreed timelines.

### **Junior Data Engineer — Graded SpA, Naples, Italy**

Jun 2023 – May 2024

- Worked as part of the data engineering team to build and maintain end-to-end data pipelines for real-time monitoring of weather and radiation sensor networks.
- Designed and implemented scalable ETL workflows using Azure Data Factory, Azure Synapse, and Databricks for ingestion, transformation, and storage of large sensor datasets.
- Developed predictive machine learning models in PySpark and Azure ML to estimate energy efficiency and optimize energy consumption patterns across smart-building systems.
- Deployed analytics solutions to Azure cloud using CI/CD pipelines and containerized environments with Docker and GitHub Actions.
- Collaborated with business analysts and energy managers to deliver interactive Power BI dashboards that provided actionable insights for operational decision-making.
- Contributed to performance optimization and cost reduction by improving data processing throughput and automating daily ingestion and reporting workflows.

### **Data Analyst — V A Solutions Pvt Ltd, Hyderabad, India**

Aug 2019 – Dec 2021

- Worked across SQL development and data analysis to support daily business operations.
- Designed and maintained ETL workflows using Azure Data Factory.
- Created dashboards and reports in Power BI for data-driven decision-making.
- Ensured data accuracy and optimized SQL queries for better performance.

# EDUCATION

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<b>Master's in Human-Centered Artificial Intelligence</b> University of Naples Federico II, Italy <i>Final Grade: 110/110(cum laude)</i>	Oct 2023 – Dec 2024
<b>Master's in Data Science</b> University of Naples Federico II, Italy <i>Final Grade: 108/110</i>	Oct 2021 – Mar 2024
<b>Bachelor of Engineering in Computer Science and Engineering</b> Nitte Meenakshi Institute of Technology, India <i>Final Grade: 8.4/10 CGPA</i>	Aug 2016 – Jul 2019

# PUBLICATIONS

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- **V. Siddapura Govindaraju**, et al. *Multimodal Biometric Authentication Using Lip Motion and Spoken Passphrases*. In: *Proceedings of the International Conference on Image Analysis and Processing (ICIAP)*, Springer, 2026. DOI: [10.1007/978-3-032-11381-8\\_45](https://doi.org/10.1007/978-3-032-11381-8_45)

# CERTIFICATIONS

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- Python: Beginner to Advanced for Data Professionals — Codebasics (Jan 2026)
- Academy Accreditation – Databricks Fundamentals — Databricks (Oct 2025)
- Introduction to Neo4j Graph Data Science — Neo4j (Oct 2025)
- Microsoft Azure Data Fundamentals (DP-900) — Microsoft / Coursera (Feb 2025)
- Create Machine Learning Models in Microsoft Azure — Coursera (Mar 2025)
- Machine Learning in Production — DeepLearning.AI (Aug 2024)
- Power BI for Data Analysts — Microsoft Press / LinkedIn Learning (May 2024)
- Getting Started with Microsoft Azure — LinkedIn Learning (Jun 2024)
- Database Engineer / DBA (MySQL, MongoDB, SQLite) — Udemy (Sep 2023)

# LANGUAGES

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English (Professional Proficiency)  
Italian (Conversational Proficiency)  
Hindi (Native Proficiency)  
Kannada (Native Proficiency)  
Telugu (Native Proficiency)

# INTERESTS

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Artificial Intelligence Ethics and Responsible AI  
Data Engineering and Cloud Computing  
Deep Learning for Biometrics and Authentication  
Chess, Traveling