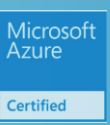




"Curious, Motivated & Determined"

Karthik Vengatesan

Data Analyst/Engineer | Applied Data Science Enabler
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<https://karthikvengatesan.github.io/iEvolve/>



SUMMARY

Research-oriented Data Analyst/Engineer with experience in Energy Management Systems, Industrial IoT, student insights and engagement monitoring. Seeking long-term active assignments to leverage industry credentials and strengths in data-driven decision-making systems.

SKILLS

Data Engineering Tools	Programming Languages & Concepts
MS/Azure SQL, SSAS Tabular, SSIS, Jupyter Notebook, Azure Data Factory/Data Brick, Azure DevOps, Talend, Microstrategy, PowerBI	Python, TSQL, DAX, PowerShell, Bicep, Kimball Data Modelling, OLTP/OLAP, SCD, CDC, ETL/ELT, RDBMS, Data Lake, REST API

ROLES & RESPONSIBILITIES

BUSINESS INTELLIGENCE SPECIALIST, UNIVERSITY OF HULL, UK

Nov '21 – Current

Data Engineer – Strategy & Insight Reporting

- Designed and implemented T-SQL stored procedures, Python Scripts and SSIS packages to streamline data processing workflows, ensuring efficient integration and transformation of complex datasets.
- Developed SSAS tabular models to power PowerBI dashboards, delivering targeted insights for academic and administrative operations.
- Designed and developed data pipelines to support student insights and engagement monitoring reports, enabling data analysts and data scientists by provisioning and preparing relevant datasets.
- Piloted and implemented CI/CD pipelines using Azure DevOps and experimented with various business use cases using Azure data engineering services to support a cloud-first strategy aimed at achieving carbon neutrality.
- I have primarily gained knowledge in student insight and engagement reporting. My technology forte includes T-SQL, Python, SSIS, SSAS, Power BI, paginated reporting, Azure DevOps, CI/CD practices, and Microsoft Azure Services.

SYSTEM SPECIALIST, SAINT-GOBAIN INDIA PVT. LTD., INDIA

Jan '19 – Aug '2021

Data Analyst/Engineer – Smart Automation & IOT

- Developed Big Data pipeline for analytics application and assisting data analyst, data scientist by provisioning smart datasets.
- I have developed and actively participated in migrating data pipelines from Talend to Azure Data Factory (ADF) as part of a larger project to transition from Cloudera to Azure HDInsight.
- Involved in development and monitoring of data pipeline activities for IT-OT integration that includes system starting from process monitoring, technical production, supply chain and warehouse management.
- Have developed multi-plant centralized visualization dashboard in Microstrategy to trace and identify quality of each production line that saves 1800 man-hours yearly.
- Have involved in development of Energy Management Analytics solutions that includes identification of product wise energy consumption and rolled it out across various BU regions within Saint-Gobain.
- I have primarily gained knowledge in Digital Manufacturing. My technology forte is Talend, Cloudera, Impala, SCADA, Microstrategy, SQL, Microsoft Azure Services.

SYSTEM ENGINEER, TATA CONSULTANCY SERVICE, INDIA

Oct '17 – Dec '18

Data Analyst – IIoT, Power and Gas Utilities Center of Excellence.

- Developed visualization dashboard, reports, notification alerts and analytical models using OSI PI Soft for monitoring key assets of renewable power plants that resulted in many recommendations, saving millions of dollars in repair costs.
- Have gained experience on end to end solutions on industrial IoT solutions for remote monitoring and diagnostics.
- Involved in various PoC on developing predictive models and optimizing existing python script for data scientist.
- Have gained basic understanding on various standards that includes IEC 61400, IEC 61724, IEC 61850, DNP3, OPC UA.
- Proposed and implemented paid proof of concept for integrating Tesla Powerwall battery data with OSI PI historian.
- I have primarily gained knowledge in Remote Monitoring of IIoT Systems. My technology forte is OSISoft PI, AWS, TCS IoT.

MASTER THESIS INTERN, IMPERSOL, PORTUGAL

Feb '17 – Aug '17

- Performed research activities on predictive modeling of thermal fracture of glass when solar control film is applied to window.

- I investigated and developed a numerical simulation tool using Microsoft Excel VBA considering French Norm DTU 39, ISO 9050.
- I have primarily gained knowledge in glass and window film industries. My technological forte is FEM, ANSYS, VBA, MATLAB, Window7.4, Optics 6, Python.

INTERNSHIP, BRAIN-E, PORTUGAL

Sep '16 – Dec '16

- A startup environment, where I engaged myself to learn, develop and support them in their upcoming project on Solar PV IoT integration platform.
- Involved in analytics development for an energy engagement platform that integrates smart metering system with PV solar roof top to showcase the way how energy is consumed.
- Have implemented and integrated metering system with AWS IoT platform to process multiples streaming alerts to events.

SYSTEM ENGINEER, TATA CONSULTANCY SERVICE, INDIA

May '14 – Aug '15

BI/ETL Developer – Energy Management Solution, TCS

- Performed key role on coordinating system development tasks of TCS Energy Management Solution that includes design, development, integration and formal testing.
- Piloted and deployed our Energy Management solution to one of our key customer in Travel and Tourism Space.
- I have primarily gained knowledge in Energy Monitoring System. My technology forte is MS SQL, Python, Tableau.

ASSISTANT SYSTEM ENGINEER, TATA CONSULTANCY SERVICE, INDIA

Nov '12 – Apr '14

Database Developer/ Administrator-Oracle RightNow, British Telecom

- Configuration, customization and implementation of RightNow/Service Cloud CX as per SOW.
- Migrate and import data from external applications in RightNow.
- Performed extensive ROQL (Read only Query Language) Queries on Custom Objects & used ROQL queries in SOAP/REST services and gained basic knowledge on REST/SOAP API web Services.
- I have primarily gained knowledge in Database Management System. My technology forte is Oracle RightNow, MS SQL, Oracle11g, Oracle Cloud Services.

EDUCATION & TRAINING

INSTITUTO SUPERIOR TECNICO, PORTUGAL

2015 – 2017

MS in Renewable Energy Systems, 15/20

Major Disciplines of Study: Energy Management, Renewable Energy, Economic and Energy Market, Hydro Power Systems, Energy Storage, Photovoltaic Solar Energy.

ANNA UNIVERSITY, INDIA

2008 – 2012

Bachelors in Mechanical Engineering, 8.4/10

Major Disciplines of Study: Power Plant Engineering, Thermodynamics, Heat and Mass transfer, Fluid Dynamics, Mechatronics, Maintenance Engineering, Total Quality Management.

CERTIFICATIONS

- Tata Consultancy Service Certified **Energy Management IIoT Engineer**.
- Inductive Automation Certified **Ignition Core SCADA Engineer**.
- E&ICT Academy, IIT Roorkee certified **Big Data Engineer with Hadoop and Spark**.
- E&ICT Academy, IIT Roorkee certified **Python Machine & Deep Learning Engineer**.
- Micro strategy Certified and Trained **Data Analyst, Database Architect & Data Scientist**.
- Microsoft Certified **Azure Data Scientist Associate**
- Microsoft Certified **PowerBI Data Analyst**.

PASSION

RECOGNITION

- Erasmus Mundus scholarship from European Union to pursue my Master's Degree.
- Community Builder for Climate-KIC Alumni Association, Portugal Chapter.
- Student secretary of Mechanical Engineering Department.

VOLUNTEER EXPERIENCE

- Besides academics, professional activities I have been actively involved in working with various non-governmental organizations like Erasmus Student Network Lisboa, Scouts, Maitree, Myrtle India, ActionAid, Lions Club etc. towards child's education, blood donation camp, awareness for global cause, refugee camp and so on where I would like to spend some quality of time with society through learning and sharing.