

Venki Ramachandran

Chief Data Scientist ■ CTO Program Wharton ■ M.S in AI/ML LJMU ■ Utility Domain

7416 Wiscasset Drive, West Hills, CA - 91304

Cell: 408-680-3376 ■ Email: ramachandran.venki@gmail.com

LinkedIn profile : <http://www.linkedin.com/in/venkiramachandran>

Personal Portfolio : <https://venkiramachandran.com/>



OBJECTIVE

Seeking a senior executive position at a electric utility focused company, that can provide me with the opportunity to drive innovation, product engineering, AI and Data Science teams to ultimately grow revenue and improve customer acquisition/retention.

EXECUTIVE SUMMARY

- Currently working as a Chief Data Scientist (CDS) at HydroPoint, managing the Hydro Analytics group and working with engineering and business systems to define the single-source-of-truth platform that can store the data we generate from our own SaaS systems and business systems to drive business decisions. Also, working with Product Management to define new product lines and conduct customer focus group meetings, to strategically plan features and new product offerings.
- Feb-2023: Received a M.Sc degree in AI/ML from Liverpool John Moores University, UK.
- Sep-2022: Completed a CTO program at the prestigious Wharton School of Business, PN, USA.
- Dec-2020: Completed a PGP Certificate course offered by Great Lakes training (affiliated to UT Austin), titled 'AI for Leaders'. Topped the class of 45 like minded industry veterans, who are now close knit.
- Aug-2010: Co-Founded Verdeeco, Inc, assisted in acquiring 600K in Series-A Angel funding - **acquired by Sensus** and later **by Xylem** in Mar-2014 for 3.5 million USD yielding a 5x return on ROI.
- Sep-2001: Founded WACS (renamed to Ecologic Analytics) - **acquired by Landis+Gyr/Toshiba**. Four (4) years of sweat equity and personal funds of 50K. Negotiated a investment with Bayard Group, who then sold this division to L+G for a 9x ROI
- Twenty Seven (27) years of Smart Grid experience with hands-on implementation experience in setting up offshore development & technology centers, hiring and setting up agile development process.
 - Fifteen (15) years managing technology centers. Responsible for all aspects of running a technology centre including hiring, setting the charter, enabling global engineering, solutions development, services (NOC and Support) sales and marketing of products for local markets, including localization of products.
 - Two (2) years of product management experience using data analysis techniques like machine learning algorithms, linear programming with multiple variables etc to solve use cases for utilities.
 - Ten (10) years Programming and Systems Integration experience - Successfully integrated with utility legacy systems like OMS, inventory and billing CIS systems at nine (9) investor-owned utilities in the USA working with SI partners like CapGemini, IBM, EDS.
- Hands-on software programming experience using Python, and R for data analytics. Past development experience was using Oracle/Postgres database, shell scripting (sed, awk, perl). Skills include logical database design & database administration.
- Highly capable of quickly hiring, training, and managing software technical teams and being productive as a "team." Capable of managing remote offshore teams in India to establish a 24x7 development, testing and follow-the-sun support model for call centers.
- Worked in the smart grid domain my entire career, Held various senior management positions within CellNet and Trilliant, having joined both of the companies at an early stage.
- Patent Owner: USPTO Serial Number: 059089, Series Code: 11, Filed: Feb 7, 2005 titled "Method and system for validation, estimation and editing of daily meter read data".
- Recognized thought leader in the MDM and AI/ML space as applicable to IoT.
- Dec-1993: M.S in Industrial Engineering from UT, El Paso, majoring in Operations Research.
- Jun-1990: B.S in Mech Engg. from VJTI, Bombay. Specialising in Automotive & Industrial Engg.

"Please review the multiple recommendations in my LinkedIn profile from my colleagues over the years"

PROFESSIONAL EXPERIENCE

HydroPoint Data Systems, Petaluma, CA **Chief Data Scientist**

May'22 - Current

I am responsible for a team of data scientists who design and are responsible for the oversight of product experiments, customer focus interviews leading to insights about what features and products customer are willing to buy and pay for. I own complex analysis to drive company and product strategy around data, data policy, data governance, how data is used by all departments to help them drive their business, and deploy online and offline models to a production environment. I am also helping the company build a single-source-of-truth platform to store all the data (from Biz Systems and our own SaaS systems) and then use the data to drive decisions within the company and for increased revenue from software and hardware products that the insights reveal. I also manage the Hydro Analytics team, which is a group of data analysts who work on a specific customer portfolios and generate reports (Pre-Analysis and Performance Metrics), interfacing directly with Sales, Operations, Product and Engineering stakeholders.

Xylem India Pvt. Ltd. Bangalore, INDIA **Head, India Technology Centre, Bangalore**

Oct'17 – Apr'22

Let's Solve Water, is the tagline for Xylem. We aim to provide the complete ecosystem to Smart Cities for freshwater life cycle management - from pumps used for getting water out of the ground, to transport, to commercial buildings, dewatering and flood control pumps, water & sewage treatment plants including rainwater harvesting. In addition to pumps, we sell water analyzers and environmental monitoring equipment. In this role, I managed 200+ engineers in the development of our IoT platform and its associated software applications. These engineers are organized within three (3) core pillars - The Global Engineering Team, Solutions development (hw, fw, sw, test and DevOps), and lastly, the Services department (NOC, 24x7 Support). Xylem acquired Sensus that had, in turn, acquired my second startup - Verdeeco back in 2014.

eMeter, a Siemens Digital Grid Business, Foster City, CA **Global Head of Customer Engagement, Training and Support**

Jan'16 – Oct'17

In this new role, I was focused on selling additional services/products to our existing Grid Control and Grid Applications customers globally, starting with US, Europe and Asia. As a "customer champion", I was taking care of the existing customer base in terms of project deployment, customer satisfaction, customer support, and offer value assessments and health-checks to ultimately identify a strategic road map for all of our utility customer's business use cases.

AutoGrid Systems, Redwood Shores, CA **Sr. Director, Professional Services**

Nov'13 – Dec'15

Leading the Professional Services team whose main charter is to manage the customer deployments in terms of scope definition, timeline creation, solution definition, solution testing, deployment, training to ultimately hand over the solution to the customer team and drive customer acceptance and satisfaction. Also, responsible for device integration, pre-sales support, demonstration of our solution and running the quality assurance team.

Customer Projects Executed:

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1. Bonneville Power Administration's C&I Capacity Commitment Program using oADR 2.0b.
2. Southern California Edison's EVSE Pilots incl. Workplace Charging using SEP 2.0 and oADR 2.0b.
3. PSEGLI's Residential direct load control program using the Wiser Air equipment.
4. Hawaiian Electric's Direct Load Control Program using the SSN AMI network

New Development Tools Used: Atlassian Products - Jira, Confluence, Calendar for Projects and HipChat
Gained working knowledge of new technology like Cloudera's CDH 5.2.0, Ansible Scripts, Git.

Board Member

Nov'13 – Dec'15

OpenADR Alliance

Evangelize OpenADR standards across our customer base to accelerate global OpenADR adoption. Currently implementing OpenADR2.0b standards based projects at various customer sites.

Harris Utilities, Ottawa, CA

Apr'12 – Nov'13

Sr. Product Manager - MDM

I am market focussed in this role, meet customers and document their need for Big Data and advanced analytics in our Meter Data Management product. Focussed primarily on providing specific apps in the Customer Service, End Consumer usage analytics, & Distribution Optimization domain using a SaaS based cloud solution offering for co-ops and munis. Specifically focussed on improving the visualization, metrics and workflow within every app so that the operators spend minimum time in the app, have the most up-to-date analytical results and can initiate action to act on them. Some of the apps I worked on are:

- Transformer Loading
- KPI Dashboard
- Demand Response and direct load control
- Dis-aggregation of end user consumption.

Verdeeco Inc, Atlanta, GA

May'10 – Apr'12

Co-Founder and VP Engineering & Services

Verdeeco is a new age data analytics play in the field of Smart Grid, providing a Cloud based, SaaS model for Co-ops and munis. The four corner stones of our solution was cloud based, SaaS, Big Data applications (using NoSQL databases like Hadoop, mongo(and machine learning analytics algorithms to solve utility problems.

- Involved with fund raising activities, and software development.
- Gained knowledge of the deregulated ERCOT market, was the key architect of the Nodal Insight data services platform
- Developed analytics solutions using the R software

Trilliant Networks, Redwood City, CA

Nov' 04 – Mar' 10

Technical Program Manager

Dec, 09 – Mar'10

- Managing the Centrica project where L+G 2B SMS meters are being deployed along with the gas meter and an In-Home Display (IHD).
- Supported the mesh network deployment of ISKRA meters in Ireland as part of the ESB technology project. Was involved with installing, upgrading and monitoring the software in their environment and testing all the features to fine tune it to ultimately meet the SLA.
- Created a Service assurance group to track the SLA for each customer in Support mode. This SLA data is stored in a database so that we can trend it for later use
- Added three of the Support customers on a yearly maintenance contract
- Consolidating the master list of all customers and sending EOL letter to phase out old systems. This will result in revenue from the migration project as well as yearly support revenue.

VP, Systems Integration and Manager, India Operations

Nov' 04 – Dec' 09

- Responsible for setup of an ODC with multiple software development teams, QA teams and support infrastructure including Tier-1 and Tier-2 support with 24x7 help desk.

- Successfully integrated Trilliant's systems with various customer CIS systems. Was the sole integration person leading all activities with CapGemini's team on the HydroOne project
- Integrated our data acquisition system with the MDM from eMeter and the utility CIS system for the Ontario market.
- Upgraded and added new code modules to SerViewCom (data acquisition) for the JPS project, namely
 - Hourly feeder loss analysis with interactive charts
 - Customer Class consumption analysis
 - Events and Power quality analysis
 - Demand forecast using Accuweather forecast data
 - Service order creation using a automated business rule engine
 - Validation, estimation and editing engine

Wireless Applications & Consulting Services (WACS), MN **Feb'01 – Nov' 04**
President, Founder and CEO

- As the founder and chief driving force, was responsible for defining the vision, articulating our offerings to key customers, sales and marketing and then putting together a team which would translate the vision into independent projects
- Successfully completed the sales of all WACS' software products to PG&E to support PG&E's AMI initiative. IBM is the systems integrator implementing WACS' products on site, worth **3.5 million USD**
- Successfully sold entire suite of WACS' products at Puget Sound Energy worth **1.5 million USD**. Yearly recurring revenue includes hourly consulting charges for two WACS consultants' on-site and yearly software maintenance fees on our products to the tune of 140k USD / yr.
- As a consultant to Puget Sound Energy (PSE), completed an investigative analysis of their data requirements and provided a strategic phased approach to implementing these applications to satisfy their business and data needs. Also, completed a project to study the entire process for interval data gathering, storage in to MV90, VEE and billing of load profile meters. Final report provided suggestions to enhance the process at both the utility and the AMR vendor s' operations center.
- Designed and managed the software development of our Unix/Oracle based Meter Data Warehouse (MDM) product, Network Performance Module (NPM) and the Automated VEE engine for daily TOU data. Used an off-shore development team in India for eight (8) months before moving software development back to the US.
- Presented the need for a MDM and its advantages at numerous speaking assignments at AMRA and Distributech

CellNet Data Systems, San Carlos, California **Aug' 1995 – Jan' 2001**
Director, Meter operations & Information systems **Sep, 1999 – Jan, 2001**

- Managed the daily tasks of three (3) groups consisting of 24 employees.
- RIMS Development - Consisted of Oracle, PB and web developers in-charge of CellNet's RIMS (Retrofit Information Management System).
- Systems Integration Group - Consisted of Unix, Oracle programmers & Network administrators, responsible for integrating our system with nine (9) IOU utilities totaling 13 million meters on eight production servers across the country.
- Applications Support Group - Consisted of support personnel handling field calls via phone and/or ARS (Remedy) System to track bugs, resolve data transfer issues, and resolve Oracle dB issues.
- Support Group – Tier-1 and Tier-2 support, Bug Tracking, resolving issues with development.

Manager, Customer Integration **Jun, 1997 – Sep, 1999**

- Managed CellNet's Integration activities with all external and internal customers. Explained our architecture and system, understood their internal systems to ultimately come up with an integration road map. Successfully integrated CellNet's systems with nine (9) IOU companies, totaling 13 million meters, across the US. These systems are still in production supplying data to the utility's various systems.
- Conceptualized, designed and helped develop CellNet's standard interval data delivery mechanism to

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MV90, an industry standard system to process interval meter data.

- Designed, developed and implemented a MapInfo based GUI application at PG&E that would poll the OCDB databases for new outage events and display them in the geographical map. A red blinking dot would represent a new outage and a green color would indicate power restoration. The application was used extensively by the utility during storm to direct its service crew.
- Project Lead for the SCM (Source Code Management) project implemented in three phases for both Field Services and CIM group using PVCS for cross platform, heterogeneous tools environment in between groups. Includes Oracle Schema management and RIMS creation scripts written in perl. Phases included Tool evaluation phase, procurement and version control phase and finally the build and release phase.
- Managed six (6) oracle programmers and one QA tester. Defined their daily tasks, managed their priorities with multiple customers.

Programmer, Oracle Applications Engineer

Aug, 1995 – Jun, 1997

- Sole Architect & Data modeler for the data warehouse for CellNet's offering on an 8.1.7 Oracle RDBMS running on Sun Solaris 5.2.
- Sys Admin duties included installation, system configuration and performance tuning of Oracle 8 databases on Solaris UNIX servers.
- Designed and developed a real time Pro*C "traffic cop" 24x7 application that would monitor Real time outage events coming in from all the devices which were then parsed and the event logged into the Oracle table. These messages would then be compressed and sent to the utility outage management systems messaging protocols.
- Developed PB/Oracle database applications using the life cycle testing paradigm, which included writing functional and design specifications, writing test cases, executing them and supporting these using our internal help desk.

EDUCATIONAL QUALIFICATIONS

- M.Sc in AI/ML from Liverpool John Moores University. **Feb, 2023**
Thesis "Time Series Analysis and Prediction using VARMAX and ARIMA models".
- CTO Program from The Wharton School. **Sep, 2022**
- M.Sc in Industrial Engineering from the University of Texas at El Paso. **Dec, 1993**
Thesis "Inspection routine generation for a flexible inspection system" was presented at the IIE conference in Phoenix AZ, 1993.
- B.S. Mechanical Engineering from V.J.T.I Bombay University, India. **Jun, 1990**