# ERIC LIVESAY

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## SENIOR DATA AND AI ENGINEER

Seasoned Data Engineer with 28 years of IT experience and over 17 years of data engineering experience, known for driving business solutions through innovative problem solving and technical acuity. Demonstrates a strong knack for swiftly mastering emerging technologies and deploying them in the service of business efficiencies. Recognized for remarkable persistence. Valuable recent experience creating solutions using AI technologies.

### AREAS OF EXPERTISE

**Data Engineering:**  
Python, Looker, DuckDB, Spark/PySpark, Vertica, Airflow/Astronomer, Postgres, Oracle PL/SQL, Tableau, Google BigQuery, SQL Server BI Stack, SAP Business Objects, NLP, Data Modeling, Kafka, JSON, Parquet, Databricks

**DevOps/Infrastructure:**  
Git, Terragrunt, S3, GCS, Google Cloud, AWS, Github Workflows/Actions, Docker, CI/CD, Nomad, RedHat Openshift

**Artificial Intelligence:**  
LangGraph, LangChain, Instructor, Ollama, PGVector, Sentence Transformers, Blip/Clip Models (vision), Whisper, Embeddings, RAG (Retrieval Augmented Generation), NLP (Natural Language Processing), LLMs (Large Language Models), Prompt Engineering, Mistral LLM, Vertex AI

**Agile Development** Jira, Team Foundation Server, Scrum, Sprints, Kanban, Backlog

### EDUCATION

**Bachelor of Science − Computer Science**  
San Diego State University, California (12/2002)

### PROFESSIONAL EXPERIENCE

#### Senior Data Engineer | Simpli.fi Holdings | Fort Worth, TX | 9/2015 – Present

Creating programmatic solutions for enabling reporting and analysis in a Big Data environment (billions of records). Data warehouse design and implementation using Vertica and Hadoop. Investigations and troubleshooting with SQL, Jupyter Notebooks with PySpark, and Kafka.

**Key Achievements:**

* Created a reporting solution using billions of records that helped generate almost $1 million in RFPs within a week’s time
* Developed ChatZTVApi - An AI-powered Fast API endpoint that converts plain text campaign targeting instructions into appropriate filter selections automatically
* Created an Ad ‘Autotagger’ using several AI Transformer-based models and embeddings to tag video and image ads based on particular categories
* Configured Google Cloud ‘G Class’ servers with L4 and T4 GPUs to test out running ‘local’ 72 billion and 32 billion parameter models with Ollama, to potentially serve LLMs internally instead of via an API to a vendor.
* Serve as data engineering lead for business/engineering unit
* Helped establish and now facilitate the AI ‘Practice’ at Simpli.fi - a group discussing best engineering practices and issues around AI
* Facilitate the Data Warehousing ‘Practice’ at Simpli.fi - a group discussing best engineering practices around data warehousing
* Created a solution for easily loading large third-party cookie/segment files into Hadoop with their segment descriptions
* Developed innovative dashboards for showing Simpli.fi and Facebook data trends with dynamic filtering and metrics selection
* Led the design and development of Facebook/omni-channel data mart and reporting in our data warehouse
* Took initiative to handle a Spark ETL job loading domains information from Bidder data
* Mentored junior team members

#### Data Engineer | HP (DOD & NMCI- Navy and Marine Corps Intranet) | San Diego, CA | 6/2013 - 9/2015

Re-hired as SME for SAP Business Objects and for existing Oracle data warehouse and reporting implementation.

**Key Achievements:**

* Restored functionality to the development environment during several outages by leveraging knowledge of existing solutions
* Completed two refreshes of Business Objects environment to align production and development environments
* Assisted with production outages by providing technical expertise and architectural understanding

#### Business Intelligence Engineer | Genoptix (a Novartis Company) | San Diego, CA | 5/2011 – 6/2013

Performed relational and dimensional cube database design, development, and optimization in data warehouse environments. Created stored procedures, triggers, views, constraints, indexes, SSIS packages, and SSAS cubes. Developed SSRS reports and MDX queries.

**Key Achievements:**

* Created a role-based dynamic security solution for Sales team integrated with Active Directory
* Developed solution to sync AD group memberships with sales management database using PowerShell and SSIS
* Initiated creation of Business Intelligence department wiki page for documentation
* Created automated backup solution using PowerShell and XMLA
* Implemented advanced SSIS technique for SharePoint updates and alerts with failure notifications
* Provided training on Business Intelligence tools for users
* Created usage reports for SSRS instances to audit user activity

#### Data Engineer | HP (DOD & NMCI) | San Diego, CA | 6/2008 – 05/2011

Created Business Intelligence solutions using SQL Server, SSAS, Microsoft Performance Point, Microstrategy, SSRS, and SAP Business Objects. Designed reporting portals using ASP.NET and SSRS Web services.

**Key Achievements:**

* Became the “go-to” expert for business intelligence initiatives
* Created architecture and initial design for Enterprise Service Management Data warehouse
* Developed SSO solution meeting government security regulations with CAC card enforcement
* Provided expertise in SSIS package configuration for robust ETL automation
* Created custom cubes, reports, and dashboards for enterprise data visualization
* Trained team members on data warehouse and reporting solutions

#### Solutions Engineer | Kintera, Inc. | San Diego, CA | 12/2006 – 5/2008

Provided engineering development, support, and expertise for custom software integrations and data migrations. Used C#, ASP.NET, ASP, MS SQL 2000/2005 to develop client solutions.

**Key Contributions:** \* Designed and developed numerous SQL Server stored procedures, functions, and tables for custom integrations \* Developed custom Reporting Services reports for various clients \* Implemented web-based monitoring application for integrations \* Improved team effectiveness through technology implementation dialogues \* Supported clients including Nashville Area Red Cross, Parents As Teachers Association, La Leche League International, Wounded Warrior Project, Arthritis Foundation, and National Association For the Deaf

#### Programmer (Contract) | Commonwealth Financial Network | San Diego, CA | 9/2006 – 12/2006

Designed Outlook Add-In and custom form using VB.NET and Visual Studio Tools for Office. Created installation package for company deployment.

#### Programmer (Contract) | Enchanted Realms, LLC | San Diego, CA | 9/2006-12/2006

Client/server programming for online gaming using Torque Game Engine, implementing cross-server player transfers.

#### Helpdesk Analyst (Contract) | Hansen Quality | San Diego, CA | 4/2006 – 9/2006

Provided production support for order processing system and internal user support. Created automation solutions with VBA.

#### IT Systems Support III | Remec (Powerwave Technologies) | Poway, CA | 11/2004 – 4/2006

Supported internal users, coordinated issue resolution, managed hardware inventory, and performed Business Applications Help Desk duties for Baan ERP and Crystal Reports.

#### Client Support Analyst (Contract) | Memec | San Diego, CA | 11/2003 – 11/2004

Provided first-level IT infrastructure support, managed support tickets, and created SQL queries and VBA/VB.NET solutions.

#### Web Designer/Programmer | Ckgsolutions | San Diego, CA | 6/2005 – 12/2006

Created and optimized company website using ASP, HTML, and JavaScript. Performed search engine optimization achieving top Google rankings.

### COMMUNITY & PERSONAL PROJECTS

#### Journey Hub | 2023 | <https://ai.google.dev/competition/projects/journey-hub>

Journey Hub is a Flutter App intended to help the needy (homeless, etc), that we entered into the Gemini AI contest. The idea for this app is to quickly connect needs with the support needed.

My Contribution: AI/Backend Development

Technologies I Implemented: Gemini Pro Model, Instructor, Firestore Vector Index, Firebase Cloud Functions

Key Contributions:

* Developed the AI backend that processes user queries using the Gemini Pro Model for highly localized resource searches
* Implemented a vector index in Firestore to enable semantic matching between user queries and resource intents
* Created Firebase Cloud Functions to handle the communication between the frontend app and the AI processing pipeline
* Used the Instructor Python library to format and structure AI responses for consistent and clear presentation to users

#### S.O.A.R. (Scriptable Online Androidino Robot) | 2015 | <https://hackaday.io/project/1903-soar-scriptable-online-androidino-robot>

An open-source robotics platform combining Arduino and Android technologies for accessibility and education.

Technologies Used: Arduino, Android, Python

Key Features:

* Designed a scriptable robot platform that could be programmed and controlled remotely
* Created a basic speech-recognition functionality allowing me to tell the robot to move in a certain difrection

### EARLY EXPERIENCE (1996-2003)

* Contributing member of S.D.S.U. Robocup soccer team - GUI programming and parallax error correction research
* Experience with GIS mapping applications for map layering and analysis
* Modified Bugzilla code (Perl) for company configuration management needs