Culley Harrelson, PhD

Email ~ LinkedIn ~ GitHub ~ Portfolio

Experience

February 2021 - Current

HCL America, Inc., Sunnyvale, CA – *Principal Data Architect*
Client: Google, Global Affairs, *Business Intelligence Group (BIG)*

- **Technical Program Management:**
  - Collaborated in the production of program documents, including project comms, BRDs, PRDs, solution design proposals, proof-of-concept prototypes, newsletters and slide decks
  - Coordinated project launches with cross-functional teammates and stakeholders
  - Backlog grooming/prioritization and issue management
  - Managed ACLs for access to sensitive data. On-going support for new users and groups
  - Managed end user and technical documentation, both as a direct contributor and project lead. Coordinated with a team of tech writers and business analysts to refactor the help center documentation for multiple compliance applications.
  - Managed technical projects using Google PgM software and custom dashboards
  - Established process discipline and engineering best practices for engineering team members, including code review workflows. Adopted the internal sql readability style guidelines to assure alignment with sql formatting and documentation standards
  - Facilitated daily scrums (I'm a certified scrum product owner)
  - Trained and mentored new team members on data models and internal data engineering tools. Facilitated knowledge transfers and changes to the team structure
  - Trained advanced stakeholders on domain-specific data models, GoogleSQL functions, spreadsheet data feeds, and other data visualization tools
  - Stayed current with the rapidly-changing corporate privacy, security and data governance policies, and used these policies to drive design decisions for data pipelines and dashboards

- **Stakeholder Engagement:**
  - Worked autonomously with global teams in multiple departments addressing governance, risk management, and compliance (GCP)
  - Gathered reporting/dashboard requirements and defined acceptance criteria, recommending potential positive outcomes, and building solutions based on consensus
  - Facilitated retrospectives and post-mortems

- **Data Engineering:**
  - Orchestrated compliance reporting pipelines for Engineering Compliance, SOX, Cloud, and RegReady through mission-critical regulatory deadlines. Managed the metadata for the tables surfaced in the corporate data lake.
  - Automated sql tests and alerts to notify engineers and stakeholders when data maintainers inject anomalous data into the system. Checked for null values, and validated accounts against HR datasets
  - Implemented CI/CD processes for automated deployment of dashboards, scripts, data sites and workflows with the Google code base. Built pipeline and dashboard packages in Linux with Bash, Blaze (building software), Rapid (deploying software), and Piper (version control).
  - Voracious knowledge acquisition and new technology adoption: cultivated an in-depth understanding of Google's compliance-related data models and Google's internal technologies for business intelligence. Quickly developed a high level of competency with: plx dashboards, in-house

unix tools, GoogleSQL, F1 materialization (data warehousing), sql-spreadsheet integration, Plx workflows (ETL tool), Critique (code review), Looker Data Studio, Ganpati2 (ACL management), Connect Composer (documentation), and GSuite
- ○ Joined data from diverse company datasets to enrich report data
- ○ Created and maintained a table that was in the top 10% of commonly used data assets at Google
- ○ Refactored materialized tables into logical views to improve performance. Migrated pipeline code and front-end visualizations into the corporate version control system
- ○ Completely refactored a critical production pipeline: Created sql tests to validated datasets had not changed, migrated downstream dashboards, adjusted ACLs, developed documentation and training material for pipeline consumers.
- ○ Migrated SQL scripts between database engines, changing syntax, built-in functions and metadata structures

- **Business Intelligence:**
  - ○ Exploratory data analysis: designed and developed compliance-related dashboards to track the status of compliance for regulations, risk assessments, remediation plans and assigned teams, and compliance control relationships to systems, products, and many other types of data. These dashboards were created with Looker Data Studio and Plx. Plx is a Google-internal data visualization tool (similar to Tableau) where dashboards can be converted to text format and checked into the corporate version control system.
  - ○ Designed conceptual and logical data models, process models, system diagrams in Google Drawings and Lucidchart.
  - ○ Refactored the user interface for a collection of 120+ dashboards critical to the SOX program. Developed the dashboard prototypes and facilitated their review/acceptance by the stakeholders. Managed a team of front end engineers to deliver the updates on schedule with the program.

2001 - 2019

Tuolumne Technology Group, Sonora, CA – *President*

Role: Founder, Product Owner, Lead Engineer

Founder / inventor of FlashcardExchange (now called cram.com), a disruptive technology startup that was first to market in 2001 for collaborative online study

- Devised and executed a business strategy that scaled the online user base from 0 to 2M users
- Sold the company for ~$1 million. cram.com is still a market leader with 3.3+ million customers and 195 Million+ flashcards
- Over time, developed and refactored the web and back-end application architecture as needed:
  - ○ *Servers*: Build unix servers and software, including package management, performance tuning, email servers, and log file processing. FreeBSD, Varnish, Apache, Postfix, Memcache
  - ○ *Design*: data modeling, UX design, application and infrastructure design
  - ○ *Data*: PostgreSQL and MySQL database engineering and administration. Logical/conceptual schema development, ETL, performance tuning for highly-available web applications, server backups, etc.
  - ○ Early adopter of AWS S3 and SES

Technology

Google Cloud, AWS, GoogleSQL, postgreSQL, MySQL, FreeBSD, Bazel, Protocol Buffers, bash, python, vim, Rest APIs, javascript, html, css, php, scrum, BigQuery/plx, MarkDown, App Script, LucidChart, Google Drawings, GSuite

Education

2021 – Meridian University, Petaluma, CA – *PhD in Psychology*

- **Capacity building for leadership and emotional intelligence:** transformative leadership, collaborativity, empathy, reflexivity, creative conflict resolution, giving/receiving feedback, perspective taking, bracketing biases.
- 1250 hours of fieldwork conducting psychological assessments, facilitating therapy groups, and practicing individual psychotherapy
- Conducted original research, producing a 300+ page dissertation in psychology. Planned and organized the data collection, and literature review. Managed the dissertation through a rigorous document review process with multiple subject matter experts as reviewers.

1995 – UC Santa Cruz, Santa Cruz, CA – *BA in Philosophy*

- Deductive reasoning, logical fallacies

References are Available on Request