

# Christian Valenzuela

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## Skills

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- **Languages:** Python, R, JavaScript/TypeScript, Node, Bash
- **Databases/Data warehouses:** PostgreSQL, MySQL, MongoDB, Google Firebase, Google BigQuery
- **Data Orchestration:** Airflow, dbt, Superblocks, DNC Portal
- **Cloud Services:** Amazon Web Service (S3, Lambda, Cognito), Azure (Container Apps, Functions), Google Cloud Platform (Cloud Functions, Container Registry, Storage Bucket)

## Experience

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### **Analytics Engineer, Democratic National Committee, May 2024 – November 2024**

- Led direct engineering support for all battleground states, supporting over 15 data directors and over 40 data engineers across the campaign.
- Created and orchestrated data pipelines in dbt and Airflow for identifying leads for prospective volunteers and canvassing opportunities.
- Maintained the campaign's Google Cloud Functions to implement feature requests, improving reliability and consistency.
- Leveraged the Jira/Slack APIs to automate task delegation, facilitating the rapid onboarding of volunteers in the final stretch of the campaign.
- Scraped county websites to obtain real time, precinct-level vote counts to be ingested by our data pipelines during election night reporting.

### **Data Engineer Consultant, UC Merced, July 2024 – October 2024**

- Instructed a team of researchers in implementing better code hygiene, leading to higher data consistency and improved documentation.
- Lowered the time of the data ingestion step by over 89% by caching results and performing bulk operations when hitting the OpenAlex API.
- Performed expensive calculations in R across millions of records, saving researchers days-worth of work to focus on final analysis in Stata.
- Created a python script that leveraged ChatGPT to summarize a series of research papers, saving hundreds of man hours of manual work.

### **Data Engineer Consultant, Politarian, November 2023 – May 2024**

- Optimized web-scraping performance by caching results requiring expensive computation, decreasing serverless function runtime by 18%.
- Configured AWS EventBridge Scheduler and serverless functions to run jobs on a schedule, freeing client from having to run scripts manually.
- Implemented more verbose logging and exception handling, improving observability on the different stages of the scraping process.
- Extended the scraper to retrieve previously inaccessible content with Selenium, increasing the number of matched records by more than 14%.

### **Full Stack Engineer Consultant, South Coast College, January 2022 – March 2022**

- Authored an interactive leaderboard for real time words per minute rankings for the college's stenography program.
- Performed business analysis with college administrators, students, and other stakeholders.
- Implemented a ReactJS frontend and NodeJS backend architecture for simplicity, composability, and scalability.
- Deployed application via Azure and designed a CI/CD pipeline to decrease deployment times and catch errors in development.

### **Data & Analytics Manager, LA Promise Fund, March 2020 – May 2024**

- Designed and implemented an efficient data pipeline for ingesting raw academic data from the Los Angeles Unified School District (LAUSD) spanning millions of records.
- Delivered mission-critical academic reports and other data products for the National School Improvement program, providing insight into student academic performance for several principals across the Slate-Z/South Los Angeles region.
- Successfully negotiated the renewal of the organization's data memorandum with LAUSD by outlining a clear mission and delivery timetable of data products to stakeholders both in the school district and across our departments.
- Extended features in our Student Information Systems (PowerSchool) by writing custom plugins in SQL, NodeJS, and Python, automating data delivery to key vendors supporting our schools.

## Education

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### **University of California, Los Angeles**

Bachelor of Arts, Political Science & Economics, June 2017

### **Antelope Valley College**

Associates Degree, Liberal Arts and Sciences II, June 2013