CHRIS GONZALEZ
SENIOR DATA & TECHNOLOGY SPECIALIST

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PROFESSIONAL SUMMARY

Senior data technologist with 10+ years of experience designing, building, and operating end-to-end data systems spanning data engineering, analytics, applied data science, and software development. Proven track record helping companies scale through automation, analytics insights, and strategy development. I've worked with C-Suite executives, mid-level managers and detailed technical roles to build solutions and translate business needs to actual performance improvements. Adept at coding in many modern languages and have first-hand experience working with the tools provided by cloud computing technologies.

PROFESSIONAL EXPERIENCE

Senior Director of Technology / Director of Data Science and Strategy

Dentologie | Chicago, Illinois
November 2022 – Present

Data Engineering

- Architected a real-time, streaming data processing infrastructure from Dentrix Ascend practice management software using **MSK Kafka**, **Lambda**, **DBT**, and **Redshift** to process thousands of daily events related to administrative and clinical coding done for patients. Subsequent architecture/data was used in many internal and external process described in the bullets below.
- Implemented a full pipeline of data extraction where **MS SQL** .bak file was delivered in **SFTP**, restored in **AWS RDS**, and finally landed in **Redshift** via **Stitch ETL**. Devised custom history tracking of tables for data science use cases. This process enabled **Power BI** reporting to track key company metrics and generate insights.
- Built a variety of **AWS Airflow DAGs** via **Python** to extract data in various ways including; **REST API**, **Webdriver automation**, and many other **custom solutions**. These DAGs also spanned extracting data from a variety of technologies including: **Microsoft Enterprise**, **AskNicely**, **Twilio**, **Square**, **Typeform**, **CustomerIO**, **Ramp**, **Paycom**, and **Invisalign**. Subsequent data was then used for internal reporting/technology and customer facing applications.
- Implemented a fully-scoped **DBT cloud infrastructure** to manage database and table/query relations in an organized and optimized way.

Data Science

- Created a "likelihood to show" (**logistic regression**) patient appointment metric to predict whether a patient would show up to their appointment. These predictions helped informed pre-appointment communications such that **A/B tests** were devised to get patients to cancel early or actually show up using language and/or imagery. Predictions here utilized patient history of appointments, demographic info, clinical procedures scheduled, and other data.

- Developed a "**smilescore**" **algorithm** to provide dental patients a single score to summarize their dental health. Using a sample of manual scores from dentists across our practices, this scoring system modeled real-world doctor expertise and leveraged clinical data such as perio charting, treatment plan information, patient survey data, and patient history of dental maintenance.

Data Analytics & Reporting

- Led the organization-wide conversion from manual **Excel** reporting to automated, fully-flushed **Power BI** reporting across all departments which included, **Clinical**, **Finance**, **Sales**, **Marketing**, **Operations**, and **Product**.
- Designed and built a variety of **compensation dashboards** for Dentists, Hygienists, and Office Managers. Utilizing a combination of **Python**, **PDF reports** generated via **Python**, and **Power BI**, these dashboards provided real-time calculations of compensation KPIs for our staff and utilized by the payroll team to submit compensation totals to **Paycom**.
- Performed **Ad-Hoc deep dives** and presented **strategy proposals** to C-Suite executives. I was also empowered to present insights to the company when I saw opportunity in the data.

Marketing

- Managed the **data pipelines** that fed our **Customer Communication Platform** (**CustomerIO**) where we managed pre-appointment communications, revenue campaigns, newsletters, and promotions across both email and SMS.
- Designed and implemented core pre-appointment campaigns in CustomerIO and successfully led efforts to improve Pre-Appointment KPIs such as Confirmation %, Health/Insurance Form collection (via Typeform) and reduced sameday no show/cancel %. Ultimately, my efforts here led to a **drop in sameday no show/cancel % by 8%**.
- Designed and implemented core revenue campaigns in CustomerIO and successfully led efforts to improve revenue scheduled from these campaigns. With AB testing and personalized patient data, **total revenue booked from campaigns increased by 15%** during my tenure as a function of total revenue booked. My campaigns were booking as much revenue as our physical offices.
- **Increased Google Review 5-star ratings by 50%** using email/sms and the principle of reciprocity to explicitly name our staff who assisted them during their visit.
- Transitioned the dentologie website from cumbersome, legacy technology (Sanity CMS) to an **AI driven website builder (lovable.dev)**. In this transition, I built automated page generation and structure for dynamic use cases such as Dentists working at Dentologie, Services pages, Locations pages, Statistics pages and tools on our website such as "verify your insurance" features. This was built using integrations between **lovable.dev and supabase (cloud postgres db service)** and **Airflow**.

Product

- Architected the data infrastructure for the Dentologie patient portal which included nuanced views of patient/appointment history, provider availability, and reflected the dynamic nature of staff at the offices, hours open at various locations, and complex business rules required by our clinics when scheduling different procedures. **Online booking revenue accounted for 50% of all revenue booked at Dentologie**.
- Designed and created a "Treatment Plan PDF" that was used both in-office by staff and in follow up communications with patients. This PDF included personalized, color-coded odontograms, easy-explanations of insurance calculations, and easy, high-level explanations of the ADA codes reflected in their plan. Using realtime **Lambda** functions, **webdriver automations**, and calls to the **ChatGPT API**, this product helped drive an **increase in close % from 60% to 70%** post-launch by simplifying the complex nuances of dental and insurance terminology.
- Designed and created an internal/external invoicing workflow for Revenue Cycle Management staff to code outstanding balances via a **Slack workflow/list** which then automated communications and invoices via **CustomerIO**, **Square**, and details about the invoice using a custom **PDF generated via Python**. Post launch, we **collected an incremental ~$500,000 in outstanding balances monthly.**

- Built a custom patient forms solution leveraging **Typeform** to collect pertinent patient information such as health intake, insurance, and various consent forms for dental procedures. Using **Python** and **Airflow/Lambda** in **AWS**, completed forms would upload automatically to **Dentrix Ascend** (Practice Management Software) which **saved thousands of hours of manual coding** for our staff. This feature is not available in current PMS software so a custom solution was created and Typeform enables our team to quickly change/add questions as well as design.
- Created an internal Slack "**Employee Recognition**" **application** that used our dental data to highlight staff hitting important milestones and also highlight providers who completed "interesting" procedures and/or treatment plans. **Employee retention** and **engagement** measured by Slack activity **increased by about 200% post-launch**.

Senior Data Scientist / Consultant

BuiltIn | Chicago, Illinois

June 2022 – April 2023

- Led a research initiative involving **AWS Personalize** and implemented the algorithm to provide personalized recommendations to BuiltIn users with regards to job postings, blog posts, and email content. Subsequent implementation of AWS personalize on the BuiltIn site and emails **drove engagement by ~30%**.
- Streamlined and updated a long-broken data pipeline to **ChurnZero** (a CMS platform designed to save soon to be churned clients). Leveraging **Airflow**, **Python**, **Snowflake**, and the **ChurnZero API**, I fixed broken/stale data connections and augmented additional data to help our customer service repos better get the full understanding of a B2B client's journey at BuiltIn. Customer service rep **save rate increase substantially from ~17% to ~23%** post launch.
- Developed and deployed a "**lead-scoring algorithm**" for free, B2B clients that predicted their likelihood to sign up for a premium membership. For this **B2B algorithm**, we sourced historical tracking data of users on the BuiltIn site, interaction with email marketing from **Snowflake**, and high level company info from **ZoomInfo**. Using an **ordered logistic regression**, I was able to develop a predictive and insightful model that was then used daily by our sales reps via **Airflow** automation and **Salesforce**.

Senior Data Scientist

Next College Student Athlete | Chicago, Illinois

April 2015 – December 2021

- Developed and Implemented a customer "**lead scoring algorithm**" that predicted likely to purchase users based on historical data collected in our **Microsoft SQL Server** DB which included data from **Salesforce** (and our previous attempts to contact), third-party form submissions and landing pages, email marketing data from our newsletter, demographic info (such as age, sport, zip code), and activity on NCSA website. Using **R** and **SQL**, I productionized a daily scoring algorithm that then sent this information to **Salesforce** for our Sales Reps to manage their day. **Sales conversion % improved by 20%** because of the additional **high-value leads discovered** by the **algorithm**.
- Developed and implemented an "**auto-attaching**" process where leads would get auto-assigned daily for sales reps to contact. This process is credited with helping the company thrive during COVID as it was able to focus sals rep time on the most important leads. I was awarded the **2020 Company MVP** award as a result.
- Created **R Shiny applications** to help decision makers **slice core data** across important metrics and help our sales reps understand their metrics via **performance dashboards**.

EDUCATION

Master of Computer Science

The University of Texas at Austin

Graduated: 2022

Master of Economics and Finance

Duke University

Graduated: 2014

Bachelor of Applied Mathematics

The University of Texas at Austin

Graduated: 2012

Bachelor of Economics

The University of Texas at Austin

Graduated: 2012

CORE TECHNOLOGIES

- Python • SQL • R • Airflow • Kafka • DBT • Redshift • Snowflake • AWS • R Shiny • EC2
- Power BI • REST APIs • Lambda • Docker • Postgres • GitHub • SFTP • Javascript • DynamoDB

SELECTED ACHIEVEMENTS AND INTERESTS

Sacramento Kings (NBA Team)

Crowdsource Competition Winner

May 2014

- **Winner** of the 'Draft 3.0' **Competition** for the Sacramento Kings 2014 NBA Draft. I advised senior leadership from an analytics perspective about players in the NBA Draft and overall team strategy. Data analysis included value of NBA prospects in the draft and free agent pool and roster composition analysis to predict wins. I used **R** and **RShiny**.
- Video
- Article

UT Austin Deep Learning Competition

3rd place finisher

May 2020

- During UT Austin's Summer **2020 Deep Learning** course, I placed **3rd** in a university-wide peer to peer competition of the game 'SuperTuxKart.' The premise of the competition was to develop a **deep learning image recognition algorithm** to identify images in frames of this video game and utilize these predictions to autonomously dictate controller movements in a game of hockey against other student algorithms. Using the images and algorithms to control our players, student algorithms played hockey against one another in a tournament style bracket. Think "Tesla Auto-Pilot" but with a video game.

Basketball & Football Reference Analytics and Web Scraping

Hobby / Occasional Consulting

Ongoing

- I currently maintain **Python** and **R** code that web scrapes popular websites related to NBA, NFL, College Baskeball and College Football data. I also maintain a **Postgres Cloud database** where this information is stored.
- As a hobby, I'll generally perform analytics and data science on these datasets and reach out to professional contacts in sports who might be interested and/or consult for them.
- Github Repo: https://github.com/chrisgonzalez0/web-scraping