

# Alan Nguyen

## Data Engineer

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## SKILLS

**Languages:** TypeScript, JavaScript, Python, Node.js, SQL, HTML, CSS, VBA

**Frameworks/Libraries:** Apache Airflow, Chart.js, Pandas, Flask, SQLAlchemy, Sequelize, Alembic, Express, React, Redux, Socket.IO

**Databases/Cloud Platforms:** PostgreSQL, Oracle, SQLite, AWS S3

**Data Analysis Tools:** Alteryx, Excel

## EXPERIENCE

**Treasury Card Analyst** ( Alteryx, SQL, Excel, VBA, Oracle )

*Costco Wholesale Corporation*

August 2019 - October 2022

- Leveraged **Alteryx** In-Database tool to optimize performance in **Oracle** by executing efficient **SQL** queries for filtering and joining tables, minimizing data transfer to accelerate reporting workflow by 10%
- Optimized ETL processes by leveraging Alteryx's parallel ETL capabilities, successfully migrating from **VBA**, **Excel**, and Alteryx to a single **Alteryx** workflow through parallel extraction of a delimited file batch load, dynamic validations cross-verifying totals from each data source against each other and target database, resulting in the elimination of two ETL pipelines and an 80% reduction in overall work time
- Created comprehensive documentation of **ETL** processes, data mappings, and transformations for future reference, contributing to improved knowledge sharing within the team
- Collaborated with cross-functional teams, and external partners to gather and analyze requirements, ensuring alignment with data transformation needs and business objectives in an effort that increased card acceptance 10% YoY

**Data Analyst** ( Excel, VBA )

*The ICEE Company*

August 2017 - July 2019

- Engineered and deployed **VBA** scripts integrating advanced data mapping and cleaning techniques for **ETL** workflow and reporting, culminating in a significant 20% reduction in weekly tasks
- Automated biweekly KPI reports with **VBA** to aggregate and present data insights to stakeholders resulting in 30% route efficiency

## PROJECTS

**SnowGlobe** ( TypeScript, React, Redux, Python, Flask, SQLAlchemy, Apache Airflow, ChartJS, HTML, CSS, SQLite )

dev | [github](#)

*A project to inform user's making plans for ski destinations by tracking snow accumulation YoY at ski resorts*

- Designed a scalable **Apache Airflow DAG** for daily ETL processes currently executing 5 parallel extraction tasks utilizing **HttpOperator**, **XComs** for downstream tasks, and **SQLiteHook** for loading
- Leveraged complex **SQL** scripts to perform data manipulations, strategically harnessing **SQLite** server-side capabilities, with the aim of optimizing for large-scale data pulls and effectively reducing client-side bandwidth consumption
- Integrated a stateful application with **Redux** to take advantage of an autonomous daily **ETL** process ensuring an up to date dashboard utilizing **Chartjs** for data visualization

**Gibberish** ( JavaScript, React, Redux, Python, Flask, SQLAlchemy, SocketIO, HTML, CSS, PostgreSQL )

[live](#) | [github](#)

*A Slack-inspired website focused on simplicity and seamless user experience*

- Enhanced **CRUD** operations by integrating **Socket.IO** with an event listener in the app.js file, ensuring efficient communication across the application
- Utilized **DbSchema** for **data modeling**, designing an optimized database schema that consolidated information, resulting in a single **Redux** state for 95% of the application and significantly enhancing overall application responsiveness
- Leveraged **React's** component-based architecture with React props and global context to reduce the amount of API fetching resulting in a seamless interaction across various UI segments

**Mango Music** ( JavaScript, React, Redux, Python, Flask, SQLAlchemy, AWS S3, HTML, CSS, PostgreSQL )

[live](#) | [github](#)

*An Apple Music-inspired website tailored around uploading music and creating personal playlists*

- Optimize **AWS S3** resource utilization by implementing an audio player that employed a targeted GET request for albums/playlists and stored it in **React's** global context, mitigating excessive data retrieval
- Collaborated in **code reviews** by utilizing **Git PRs** resulting in a 40% reduction in post-release bugs

## EDUCATION

**Full-Stack Web Development Program** - App Academy | 2023

**TLG Learning Certification** - Data Analysis using Power BI Desktop | 2020

**BS Mathematics** - California State Polytechnic University, Pomona | 2016