

# Charlie Pecora

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## EXPERIENCE

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### Levelten Energy

Seattle, WA

*Lead Software Engineer*

*May 2023 – Present*

*Senior Software Engineer*

*May 2022 – May 2023*

- Led a seven-person engineering team that was responsible for developing and maintaining data pipelines, back-end services, and micro-front-end angular applications to support renewable energy project data and provide historical and forecasted analytics in our marketplace
- Re-platformed Levelten's energy marketplace analytics processing to a distributed architecture using Cloud Run, Apache Beam, Cloud Tasks, and Cloud Storage, resulting in a 10x improvement in processing time and an order of magnitude reduction in on-call incidents
- Delivered a six-month, multi-team project to replace the analytics methodology used for renewable energy financial analytics in our platform

### Blue Origin

Kent, WA

*Developer - Data and Business Intelligence III*

*February 2022 – May 2022*

*Developer - Data and Business Intelligence II*

*September 2020 – February 2022*

- Created and scheduled ETL pipelines in Dagster to extract data from relational databases, REST APIs, GraphQL APIs, Elasticsearch, and shared drive files
- Wrote SQL data transforms using DBT in PostgreSQL to support analytics and reporting needs
- Developed a part shortage report, which takes user inputs as configuration and calculates inventory shortcomings by analyzing design, inventory, manufacturing, and procurement data, and is now the company's trusted source for identifying hardware shortages and supports roughly 50 regular users
- The part shortage report is composed of a web interface for user input (Vue front-end and FastAPI back-end), a background data processing service (Python with Redis for query caching), and a Tableau report
- Developed a Python REST API using FastAPI to provide Design Engineers with automated access to up-to-date material properties from the company's materials database
- Automated code and infrastructure deployment to AWS using Docker, Terraform, and Gitlab CI

### APIJET

Seattle, WA

*Systems Engineer*

*June 2018 – August 2020*

- Created a data pipeline using Python, PostgreSQL, cron, and AWS S3 to decode avionics data and make it readily available for batch analytics processing
- Used the data pipeline to implement logic for real-time aircraft alerting and reporting logic
- Developed algorithms to determine an aircraft's deviation from its flight plan
- Managed the network and hardware configuration within the avionics system integration lab
- Performed and documented system integration testing for the airborne software platform

## SKILLS

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**Languages:** Python, JavaScript, Golang, Rust

**Technologies:** PostgreSQL, BigQuery, Apache Beam, Redis, Firestore

## EDUCATION

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### University of Washington

Seattle, WA

*Master of Science in Aeronautics and Astronautics*

*September 2016 – June 2018*

### University of Miami

Coral Gables, FL

*Bachelor of Science in Mechanical Engineering, Minor in Economics*

*August 2012 – May 2016*