

Juhyeok (Jay) Sin

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PROFESSIONAL EXPERIENCE

Cuberg Inc. (Acquired by Northvolt)

San Leandro, CA

Data Scientist

Sep 2021 – Present

- Developed an Anomaly Detection model to detect and classify process deviations, instantly alerting stakeholders. Implemented in a human-in-the-loop architecture, enabling continuous improvement of classification and detection accuracy, and empowering engineers to draw causal conclusions from the data.
- Conducted ANOVA and non-parametric tests to analyze machine part wear and developed a predictive model for optimal replacement, enhancing maintenance efficiency and reducing downtime and costs.
- Established a PostgreSQL data model for integrating procurement data from an API source using ETL and implemented Looker Explore for streamlined KPI dashboarding, improving data accessibility and decision-making speed.
- Implemented advanced statistical models, including linear regression, Gaussian distribution, and Empirical Cumulative Density Function (ECDF), within the battery cycling channel management system. Accurately forecasted channel availability and achieved a 20% increase in channel utilization, enhancing resource allocation efficiency.
- Supported the manufacturing team by organizing data marts and creating dashboards in Looker, such as first pass yield and failure Pareto charts, to track key performance indicators (KPIs).

Apple Inc.

Cupertino, CA

Data Analyst

Mar 2020 – Aug 2021

- Developed a Python script with API integration to scrape image, video data, and associated metadata, consistently delivering thousands of fully quality-assured images and videos weekly to support the Data Science team.
- Designed and implemented dashboards using Tableau Desktop and Tableau Server, facilitating the quantification and analysis of image and video data across various categories, enhancing data visibility and decision-making.
- Contributed to the Exposure Notification project, Apple/Google's efforts to contain COVID-19 pandemic by planning and conducting survey research.

SKILLS

Data Analysis: Python (Pandas, Numpy, Plotly, Scipy, Scikit-Learn, Stats), R, SQL (Trino, PostgreSQL, MySQL), Statistical Process Control, ANOVA, Machine Learning

Dashboard/BI Tools: Looker, LookML, Streamlit, Grafana, Tableau

Data Engineering: Python (Prefect and Pydantic), ETL, PySpark, Google Cloud, Dropbox, Bigquery

Developer Tools: Conda, Docker, Git, Unix

Documentation: Atlassian (Jira and Confluence), Lucid Chart, MS Office, G-suite

EDUCATION

M.S. in Analytics

Jan 2024 – Present

Georgia Institute of Technology

B.S. in Applied Mathematics, Minor in Computer Science

Dec 2019

San José State University

Cum Laude