

# Sahil Dadhwal

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## EXPERIENCE

### Data Engineer Intern

April 2024 – Present

*BTIS*

*Sacramento, CA*

- Engineered Python ETL pipelines processing 15+ GB datasets from 50+ MongoDB collections to SQL Server, reducing data inconsistencies by 90%
- Led cross-functional coordination among 15+ stakeholders, ensuring 100% on-time delivery of 8 critical data migration projects
- Developed 50+ Power BI dashboards for CTO and business executives using Snowflake data warehouse, supporting \$10M+ in strategic data-driven decisions
- Built comprehensive data validation framework and architected WCPOLS compliance solution processing 2M+ weekly records
- Served as BTIS's first intern, where after 3 months of consistent high level performance led CTO to expand program and hire 5 additional interns

### Team Lead

June 2023 – April 2024

*First Northern Bank*

*Dixon, CA*

- Led team of 8+ employees, implementing training program that reduced onboarding time by 40% while improving performance by 25%
- Conducted risk assessments for transactions up to \$2M and created operational dashboards, reducing processing errors by 30%

### IT Intern / Support Specialist

June 2023 – April 2024

*Thakur Inc, U-Haul Dealership*

*Fairfield, CA*

- Optimized rental operations and inventory management, increasing vehicle utilization by 20% and reducing data entry errors by 35%

## TECHNICAL PROJECTS

### Bird Species Distribution Tracker | *Python, React, FastAPI, MongoDB, ML, GIS*

April 2025 – May 2025

- Built full-stack dashboard analyzing 5M+ bird observation records to visualize climate change impact on species migration patterns using GBIF and PRISM climate APIs
- Implemented ML forecasting models predicting future species distribution shifts with interactive geographic heatmaps and seasonal analysis visualizations
- Architected FastAPI backend with MongoDB for processing multi-gigabyte geospatial datasets and React frontend with real-time data filtering across 10+ North American species

### AI Toxicity Detection in Discussions | *Python, BERT, APIs, Statistical Analysis*

Jan. 2025 – March 2025

- Analyzed correlation between toxic communication and developer productivity across GitHub repositories using GitHub Archive data and Incivility Dataset with 1M+ interactions
- Implemented BERT-based toxicity detection model with API rotation system processing repository metrics, commits, and issue resolution patterns
- Conducted statistical analysis (Spearman/Pearson correlations) revealing significant relationships between communication patterns and project outcomes

## EDUCATION

### University of California, Davis

Sept. 2024 – June 2026 (Expected)

*Master of Science in Computer Science*

*Davis, CA*

### University of California, San Diego

Sept. 2019 – June 2023

*Bachelor of Science in Computer Science — A.S. in Mathematics & Economics*

*San Diego, CA*

## TECHNICAL SKILLS

**Languages:** Python, SQL, Java, JavaScript, C++, HTML/CSS

**Data Engineering:** ETL/ELT, Data Modeling, MongoDB, PostgreSQL, SQL Server, Snowflake, Power BI, Tableau

**Machine Learning:** scikit-learn, BERT, NLP, Statistical Analysis, Predictive Modeling, GIS

**Tools & Frameworks:** Jenkins, Git, Docker, pandas, FastAPI, React, REST APIs, CI/CD, GitHub API