

# Albert Wei

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## EDUCATION

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### University of Michigan

2021 — 2021

MSE Industrial & Operations Engineering – Operations Research

*Ann Arbor, MI*

BSE Industrial & Operations Engineering

- Awards: Summa Cum Laude (2021, 2022), Dean's List (2018–2022), University Honors, James B. Angell Scholar

## EXPERIENCE

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### Palantir Technologies

2025 — present

Data Engineer

*New York, NY*

- Migrated petabyte-scale production datasets to iceberg table format, optimizing storage costs by 40+% and enabling real-time analytics capabilities for enterprise stakeholders

### Capital One

2021 — 2025

Senior Data Analyst

*McLean, VA*

- Owned US Card complaints data pipeline (Snowflake SQL and Python), migrated data source to S3 enabling real time updates, reduced dataset query time from 300 to 1 seconds, and oversaw change management for 100+ analysts onto production system serving SVP+ leadership
- Refactored legacy retail bank overdraft risk model monitoring pipeline, combining 8 cloud data sources and optimizing runtime from 4+ hours to 20 minutes through parallelization and Apache Spark compute optimization
- Built central data quality framework using Python and Apache Airflow, eliminating 20+ organization-wide adhoc solutions and enabling advanced statistical trend analysis capabilities with scalable infrastructure supporting 70+ production datasets
- Led federal Community Reinvestment Act (CRA) compliance data strategy coordinating cross-functional teams and delivering regulatory submissions to US Treasury OCC
- Designed and implemented intelligent real-time recoveries analytics infrastructure using Airflow, Apache Hamilton, and Snowflake supporting \$10M+ core business decision-making

### University of Michigan – Transportation Research Institute

2018 — 2021

Model Developer & First Author

*Ann Arbor, MI*

- Published peer-reviewed first-author paper on parametric head geometry modeling using PCA and multivariate linear regression in MATLAB
- Automated landmark and feature extraction from 1,000+ CT images with Machine Learning radial basis functions and cubic spline interpolation

## PUBLICATIONS

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- A Parametric Head Geometry Model Accounting for Variation Among Adolescent and Young Adult Populations, Wei, A., et al., Computer Methods and Programs in Biomedicine (2022)

## TECHNICAL SKILLS

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- **Programming & Core Tools:** C++, Rust, Python (pandas, numpy, scikit-learn, TensorFlow, PyTorch), SQL (Snowflake, PostgreSQL, NoSQL), R, CI & CD (Github Actions, Jenkins)
- **Data Engineering & Infrastructure:** Apache Spark, Airflow, Kafka, Hamilton, AWS (S3, Glue, Redshift, EMR, SageMaker, Lambda, Athena), Azure (Databricks, Blob Storage, Data Factory, Synapse), GCP (BigQuery, Cloud Storage, Dataflow, Dataproc), Docker
- **Analytics & Visualization:** Jupyter Notebooks, Tableau, Power BI, Statistical Regression Analysis, Time Series (ARIMA, Prophet), A/B Testing
- **Machine Learning & Optimization:** Predictive Modeling, Natural Language Processing, Anomaly Detection & Variance Testing, Linear & Nonlinear Optimization, Operations Research