

Albert Wei

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EDUCATION

University of Michigan MSE Industrial & Operations Engineering – Operations Research BSE Industrial & Operations Engineering	2021 — 2021 <i>Ann Arbor, MI</i>
• Awards: Summa Cum Laude (2021, 2022), Dean's List (2018–2022), University Honors, James B. Angell Scholar	

EXPERIENCE

Palantir Technologies Data Engineer	2025 — present <i>New York, NY</i>
• 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 Senior Data Analyst	
	2021 — 2025 <i>McLean, VA</i>
• 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	
Model Developer & First Author	
• 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

- 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

- **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