Justin Childress

Data Engineer, Data Scientist, Aerospace Engineer

Knoxville, Tennessee

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Skills

Languages	Python, SQL, MATLAB, LaTeX
Databases	SQL Server, TSQL, BigQuery, Cloud Storage
Technologies	Airflow, DBT, MS Office, Tableau, Tableau Prep, Power BI, Google Drive, ANSYS Fluent, Pointwise, AutoCAD, SolidWorks
Soft Skills	Strong communication, cross-functional collaboration, initiative-driven, adept at communicating techincal concepts

Experience

FreightWaves
Chattanooga, TN
Data Engineer — *Mar. 2022 - Present*
- Utilized Airflow to design and deploy automated pipelines for data ingestion and transformation
- Collaborated with product and data science teams to produce insights into air cargo and logistic datasets
- Played major role in organizing and running team-building events to improve interdisciplinary collaboration

Consulting
Knoxville, TN
Data Engineer — *Nov. 2024 - Present*
- Contracted with commercial real estate data company to assist with customer integrations
- Designed and delivered custom python scripts to build spreadsheets from API calls

Mortgage Investors Group
Knoxville, TN
Business Analyst — *Apr. 2020 - Mar. 2022*
- Built and optimized operational dashboards in Tableau to monitor key performance metrics
- Automated data pipelines and API integrations using Python, accelerating reporting cycles

FreightWaves
Chattanooga, TN
Data Scientist — *Jun. 2019 - Feb. 2020*
- Promoted from intern to full-time data scientist within months due to rapid impact
- Supported a multimillion dollar client engagement
- Developed SQL transforms to deliver customer facing analytics

Research

Data Science of Fluid Mechanics Research Project
University of Tennessee
Graduate Student — *2023*
- Developed python program to analyze videos of flame fronts
- Extracted data on temperature gradients and determined regions steady state behavior
- Investigated feasibility of fully visual techniques when traditional measurement techniques are impractical
- Utilized Fourier Transforms to identify dominant frequencies and combustion characteristics of flow

Rocket Nozzle Heat Transfer Analysis
University of Tennessee
Graduate Student — *2017*
- Modeled nozzle geometry and generated a comupational mesh using Pointwise
- Simulated high-energy gas flows using ANSYS Fluent to assess thermal stress and material limits
- Defined constraints to safely test experimental rocket nozzle

Novel Propellants for Hybrid Rockets
University of Tennessee
Undergraduate Student — *2016*
- Co-designed and operated a small-scale hybrid rocket thrust stand
- Authored safety and test documentation to support future research teams

Education

University of Tennessee, Knoxville
Knoxville, TN
Master of Science in Aerospace Engineering — *May 2024*
- **Focus on Computational Fluid Dynamics, Data Science, Numerical Methods**

University of Tennessee, Knoxville
Knoxville, TN
Bachelor of Science in Aerospace Engineering — *August 2016*