

# Justin Childress

DATA ENGINEER, DATA SCIENTIST, AEROSPACE ENGINEER

Knoxville, Tennessee

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## Skills

<b>Languages</b>	Python (NumPy, Pandas, SciPy, etc.), SQL, MATLAB, LaTeX
<b>Databases</b>	SQL Server, TSQL, BigQuery, Cloud Storage
<b>Technologies</b>	Airflow, DBT, Docker, Git, GCP, AWS, Azure, Terraform, Jira, Confluence, Regular Expressions (regex), Trello, Tableau, Tableau Prep, Power BI, Google Drive, MS Office, ANSYS Fluent, Pointwise, AutoCAD, SolidWorks
<b>Soft Skills</b>	Strong communication, cross-functional collaboration, initiative-driven, adept at communicating technical concepts

## Experience

### FreightWaves

DATA ENGINEER

- Utilized Airflow to design and deploy automated pipelines for data ingestion and transformation
- Maintained over 110 DAGs in production in addition to legacy pipelines using google cloud functions and SQL stored procedures
- 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

Chattanooga, TN

Mar. 2022 - Present

### Consulting

DATA ENGINEER

- Contracted with commercial real estate data company to assist with customer integrations
- Designed and delivered custom python scripts to build spreadsheets from API calls

Knoxville, TN

Nov. 2024 - Present

### Mortgage Investors Group

BUSINESS ANALYST

- Built and optimized operational dashboards in Tableau to monitor key performance metrics
- Automated data pipelines and API integrations using Python, accelerating reporting cycles

Knoxville, TN

Apr. 2020 - Mar. 2022

### FreightWaves

DATA SCIENTIST

- 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

Chattanooga, TN

Jun. 2019 - Feb. 2020

## Research

### Data Science of Fluid Mechanics Research Project

GRADUATE STUDENT

- 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

University of Tennessee

2023

### Rocket Nozzle Heat Transfer Analysis

GRADUATE STUDENT

- Modeled nozzle geometry and generated a computational 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

University of Tennessee

2017

### Novel Propellants for Hybrid Rockets

UNDERGRADUATE STUDENT

- Co-designed and operated a small-scale hybrid rocket thrust stand
- Authored safety and test documentation to support future research teams

University of Tennessee

2016

## Education

### Master of Science in Aerospace Engineering

UNIVERSITY OF TENNESSEE, KNOXVILLE

- Focus on Computational Fluid Dynamics, Data Science, Numerical Methods

Knoxville, TN

May 2024

### Bachelor of Science in Aerospace Engineering

UNIVERSITY OF TENNESSEE, KNOXVILLE

Knoxville, TN

August 2016