

Justin Childress

DATA ENGINEER, DATA SCIENTIST, AEROSPACE ENGINEER

Knoxville, Tennessee

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Skills

Languages	Python (NumPy, Pandas, SciPy, etc.), SQL, MATLAB, LaTeX
Databases	SQL Server, TSQL, PostgreSQL, BigQuery, Cloud Storage
Technologies	Airflow, DBT, Docker, Git, GCP, AWS, Azure, Terraform, Jira, Confluence, Trello, Regular Expressions (regex), Linux, Tableau, Tableau Prep, Power BI, Google Drive, MS Office, ANSYS Fluent, Pointwise, AutoCAD, SolidWorks
Soft Skills	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