

Dhruva Venkat

AEROSPACE ENGINEERING AND MATHEMATICS · GEORGIA INSTITUTE OF TECHNOLOGY

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Education

Georgia Institute of Technology

BACHELOR OF SCIENCE IN AEROSPACE ENGINEERING

- Specializing in Aerodynamics and Fluid Mechanics
- Specializing in Propulsion
- Relevant Coursework: Structures, Thermofluids, Aerodynamics, Structures, System Dynamics, Circuits, Vehicle System Design, Jet/Rocket Propulsion
- GPA : 3.51 (Dean's list)

Atlanta, Georgia

Aug. 2019 - Dec. 2023

Georgia Institute of Technology

BACHELOR OF SCIENCE IN MATHEMATICS

- Specializing in Applied Mathematics
- Relevant Coursework: Theoretical and Numerical Techniques in Linear Algebra, Data Structures and Combinatorics, Probability Theory, Real Analysis, Topology
- GPA : 3.51 (Dean's list)

Atlanta, Georgia

Aug. 2019 - Dec. 2023

Work Experience

Sandia National Laboratories

RESEARCH INTERN

- Model and Predict transient stability and control for power systems
- Apply Koopman-EDMD and Neural Networks to capture dynamics of large finite-state systems

Albuquerque, New Mexico

May 2022 - August 2022

Georgia Tech Research Institute

RESEARCH ASSISTANT

- Research dendrite formation in Solid State Lithium Batteries
- Simulate multi-physics phase field models in COMSOL

Atlanta, Georgia

Aug. 2021 - Present

Georgia Tech Research Institute

RESEARCH INTERN

- Spatiotemporal Modelling of COVID 19 Spread
- Used ANSYS Fluent and OpenFOAM to model turbulent airflow inside buildings
- Worked on a custom Rhino plugin for particle tracking in non-continuum flows

Atlanta, Georgia

May 2021 - Aug. 2021

Aerospace Systems Design Laboratory

RESEARCH ASSISTANT (BOEING SPONSORED PROJECT)

- Modeling wrinkle formation in aircraft stringer manufacturing using data from CATIA V5
- Using Python data modeling techniques and machine learning algorithms

Atlanta, Georgia

Jan. 2020 - May 2021

InCadence Strategic Solutions

DATA SCIENCE INTERN

- Worked in OpenCL on improvising and improving a MinHash Implementation
- Did Full-Stack Development on a data collection project

Manassas, Virginia

Jun. 2019 - Jul. 2019

InCadence Strategic Solutions

DATA SCIENCE INTERN

- Worked on a database wrapper implementing basic CRUD functions
- Implemented a python MinHash Algorithm to run de-duplication checks

Manassas, Virginia

Jun. 2018 - Aug. 2018

Extracurricular Activity

Yellow Jackets Space Program

PROPULSION TEAM ENGINEER

- Design valves and plumbing systems on a liquid rocket
- Perform pressure testing and machining of parts
- Spec TVC Linear Actuator control for full-scale design
- Propose and implement testing campaign using solid rocket motors
- Work on a 6-DOF simulation to find design parameters and feasibility

Atlanta, Georgia

Aug. 2021 - Present

Skills

CAD	CATIAV5, Revit, Inventor, Rhino, Salome
Aerospace	Solidworks, ANSYS Fluid Fluent, OpenFOAM, MATLAB, Mathematica, SysML
Python	Pandas and Statistical Analysis, COM Interfaces, Numpy, Tensorflow and Keras
C/C++	OpenCL, Arduino

Projects

Agricultural Robot

TEAM LEAD

- Designed an autonomous, fleet for cheap, increased agricultural efficiency
- Developed a Solidworks model of the proposed fleet with other team members

Atlanta, Georgia

Jun. 2020 - Jul. 2020

Jet Engine Design

CORE MEMBER

- Worked on designing air-breathing engines for various commercial needs
- Modeled engine components using MATLAB to produce key engine performance parameters

Atlanta, Georgia

Jun. 2020 - Jul. 2020