

Luke M. Bedrosian

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EXPERIENCE

The Aerospace Corporation

Chantilly, Virginia

Assoc. Member of Technical Staff, Modeling & Simulation Computing Dept.

Oct 2024 – Present

- Actively contribute to delivering software solutions that aid in the analysis and management of space enterprises, supporting critical government missions
- Work as part of a software development team using an agile workflow including using git/bitbucket and JIRA for managing tasks.

Assoc. Member of Technical Staff, System of Systems Engineering Dept.

May 2024 – Sept 2024

- Developed and enhanced features for [PDST](#), a space architecture modeling and visualization tool, supporting the needs of Aerospace program offices and government customers (C++, Qt).
- Optimized PDST's performance with concurrent computing methods and refined the user interface, resulting in increased efficiency and usability for end-users.
- Spearheaded the integration of PDST into an automated workflow to visualize performance metrics, resulting in streamlined analysis processes and enhanced decision-making efficiency for government customers (C++, Qt, Python, Linux)

Technical Intern, System of Systems Engineering Dept.

May 2023 – May 2024

- Implemented various graph analysis algorithms and incorporated them into an existing space architecture and modeling visualization software tool (C++, Qt).
- Implemented probabilistic graph analysis algorithms using Monte Carlo simulation to estimate future performance of satellite networks (C++).
- Produced SysML models of US cloud provider services, giving our program offices and government customers greater clarity when architecting their cloud solutions
- Led discussions with government customers to establish rapport, clarify objectives, and define project scope, goals, and deliverables

Systems Engineering, Architecture and Knowledge Lab

College Station, Texas

Undergraduate Research Assistant

Dec 2020 – May 2023

- Developed [Comet](#), a multi-objective optimization tool for designing satellite electric power systems, for Lockheed Martin, leading to pareto front exploration and more optimal designs (Python, DEAP)
- Developed multi-fidelity satellite simulation tool with hardware-in-the-loop (Python, Ruby)
- Developed rules-based design algorithms using empirical relationships to size the electric propulsion systems of satellites during early architecting phase (Java, JESS)

SKILLS

Programming Languages: C++ (Proficient), Python (Proficient), C (Fluent), TensorFlow (Basic), Java (Basic), HTML/CSS/ JavaScript (Basic), Haskell (Basic)

Frameworks/Libraries: Qt (C++), Pandas, NumPy, SciPy, DEAP, TensorFlow, PyTorch, Orekit

Other Software: Linux/Unix, Visual Studio, VS Code, PyCharm, IntelliJ, MATLAB, STK, XML, JSON

EDUCATION

Georgia Institute of Technology

Atlanta, Georgia

Master of Science in Computer Science

May 2027 (Expected)

Remote, Part-time

Texas A&M University

College Station, Texas

Bachelor of Science in Aerospace Engineering

May 2024

Minors: Computer Science, Mathematics

Honors: Magna Cum Laude, Engineering Honors, Presidents Endowed Scholar, Chief Student Leader