

SARVESH CHANDRAKUMAR

U.S. Citizen | Eligible to obtain a Security clearance

Fremont, California 94555 | (510) 690-3798 | sarvesh.chandrakumar@gmail.com | linkedin.com/in/sarveshchandrakumar

EDUCATION

University of Colorado Boulder | *B.S. Aerospace Engineering*

Aug 2024 - May 2028

Minors: Economics; Engineering Management (Lockheed Martin Program) | GPA: 3.62 | Dean's List

Relevant Coursework: Experimental Methods, Dynamics & Control, Introduction to Aeronautics, Heat Transfer, Thermodynamics, Space Mission Design, Introduction to Astronautics, Statics, Dynamics, Ordinary Differential Equations, Linear Algebra, Engineering Projects

TECHNICAL SKILLS

Engineering Software: MATLAB/Simulink, SolidWorks, NASTRAN, Satellite Tool Kit (STK), Microsoft Word, Excel, PowerPoint, Visio

Programming: C++, Python, HTML/CSS/JavaScript

Aircraft Performance & Design: Weight and balance, center-of-gravity calculations, wing loading, aspect ratio, mean aerodynamic chord, wetted-area estimation, tail sizing, stability analysis, lift and drag analysis

Systems & Test Engineering: Systems integration, interface coordination, test planning and procedures, verification and validation, configuration traceability, technical documentation, anomaly investigation, root-cause analysis

Instrumentation & Data Analysis: Wind Tunnel Testing, DAQ systems, load cells, pressure transducers, temperature sensors, Valves, Regulators sensor calibration, test readiness, experimental data collection and reduction

Aerospace & Mechanical Engineering: Solid rocket motors, internal ballistics, thrust and chamber-pressure analysis, aerodynamics, thermodynamics, heat transfer, CAD parts and assemblies, test fixtures, 3D printing, Drill Press, Hand Tools, BOM management, design for manufacturability

EXPERIENCE

Propulsion Test Engineer | *CU Sounding Rocket Lab*

Sept 2025 - Present

- Authored 3 test plans and supported 3 solid-motor static-fire tests within a 4-6 person cross-functional team, progressing from test support and analysis to planning and leading test preparation and execution in February 2026.
- Integrated motor hardware, test fixtures, DAQ, load cells, pressure transducers, and temperature sensors while coordinating mechanical and electrical interfaces across propulsion, structures, and avionics teams.
- Identified heat transfer through the test fixture as the cause of load-cell drift, then added thermal shielding and pre-test zeroing to reduce baseline drift from 4% to under 1% on the next test.
- Used MATLAB to analyze thrust-time and chamber-pressure data and calculate total impulse within 6% of predicted internal-ballistics performance, supporting test verification and model correlation.
- Maintain technical documentation of test configurations, results, findings, and hardware or procedural changes to preserve traceability across iterative design-build-test cycles.

Flight Operations Intern | *Hayward Flight*

Dec 2023 - Jan 2025

- Troubleshoot, repaired, calibrated, and integrated four flight-simulator PCs with yoke and rudder-pedal hardware, restoring reliable system availability for customer training.
- Diagnosed simulator software, plugin, peripheral, and configuration faults across hardware/software interfaces, applying repeatable fixes that improved system availability.

ENGINEERING PROJECTS

Wind Tunnel Airfoil Test & Lightweight Glider

Fall 2025

- Instrumented and tested a Clark Y-14 airfoil using 16 pressure taps at 30 m/s and angles of attack from -7 to +7 degrees, collecting repeatable pressure data under controlled flow conditions.
- Analyzed experimental data in MATLAB to generate pressure-coefficient plots and lift estimates, compared results with published NACA data, and documented findings in a formal technical report.
- Applied experimental findings and aerodynamic principles to design a lightweight glider within a 1-meter span constraint, calculating weight and balance, center-of-gravity location, wing loading, an aspect ratio of approximately 9, mean aerodynamic chord, wetted area, tail volume, and dihedral to optimize performance and stability.

Aerial Seed Dropper - Mechanical Design & Testing

Spring 2025

- Designed and assembled a servo-actuated rack-and-pinion flow gate in CAD; built and tested three gate geometries for flow consistency, manufacturability, and assembly before selecting the final design.
- Integrated a modular 3D-printed housing, threaded cap, fasteners, and silicone sealing for maintainable, weather-resistant operation.

Conway's Game of Life - C++ Simulation

Fall 2024

- Developed an object-oriented C++ simulation with reusable classes and file I/O; verified behavior with boundary, stable-pattern, and oscillating-pattern cases and corrected edge-case defects.

LEADERSHIP & CO-CURRICULAR ENGAGEMENT

American Institute of Aeronautics and Astronautics (AIAA) - Member

2025 - Present

- Contribute ideas for chapter events and help plan activities and logistics that support member participation and professional development.