Isara Chankhunthod

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Education

University of Colorado Boulder Expected May 2028

B.S. in Aerospace Engineering, **Minor** in Computer Science

- GPA 3.12/4.0 – Presidential Merit Scholarship
- Relevant Coursework**:** Statics, Thermodynamics, Intro to Aeronautics, Differential Equations and Linear Algebra, Multivariable and Vector Calculus, Data Structures & Algorithms, Design and Analysis of Database Systems

Experience

Electrical Circuits Team, CU Hyperloop – Boulder, CO Mar 2025 – Present

- Develop an autonomous tunnel boring machine to compete in The Boring Company's Not-A-Boring Competition, adhering to strict design guidelines.
- Design and implement custom PCBs for GNC, fluids, and power distribution subsystems, ensuring reliable electrical integration across all onboard systems via SPI and I2C
- Apply high/low power safety practices for schematic and layouts on Altium, mitigating system failure under high load.
- Consolidated circuit designs, cutting the total number of boards in half, reducing required revisions and testing cycles and accelerated overall system integration.

Student Pilot/Volunteer Pilot, Palo Alto Flying Club – Palo Alto, CA Aug 2018 – Sept 2023

- Logged flight hours toward Private Pilot License in a Cessna 172 under FAA Part 61 training, gaining experience in flight planning, navigation, and aircraft operations.
- Completed volunteer animal transport missions through Pilot N' Paws, piloting shelter pets to foster families across the Bay Area and expanding adoption opportunities.

Projects

BalloonSat UncNFriends – CU Boulder Feb 2025 – May 2025

- Built 20cm cube satellite with vacuum chamber, heatpad, and sensors for biological payloads at ~30 km.
- Wrote autonomous Arduino script for temperature control and data collection in stratospheric conditions.
- Designed a custom gasket and pull-out panel to ensure airtight sealing and reliable payload integration.
- Sustained two vials of brine shrimp throughout flight successfully alongside data acquired

Wing Glider, ASEN 2502 Intro to Aeronautics – CU Boulder Aug 2025 – Present

- Designing and prototyping a no-thrust lightweight glider aircraft, capable of +180 m in glide range from 15 m launch height, carrying a small payload, and fulfilling stability requirements.
- Conducting aerodynamic studies in MATLAB to optimize wing loading, airfoil selection, and stability margins.
- Prototyping via CAD, CNC hotwire cutting, and 3D printing, integrating structure and elevator for longitudinal trimming.

Dyson Bladeless Drone – Personal Project July 2025 – Present

- Designing a quadcopter UAV utilizing bladeless fans for thrust and control, with embedded control system, integrating IMUs, GPS, and onboard compute for autonomous flight.
- Developing control architecture in C++/Python and integrating telemetry and sensors for flight testing.

NoCap AI Fact-Checking Platform – Berkeley CalHacks 12.0 (Top 3 out of 697) Oct 2025

- Built an AI-powered full-stack web app that identifies and verifies factual statements from speech or text, distinguishing facts from opinions in real time.
- Integrated Claude AI, Vapi, Lava, and BrightData to perform voice-to-text transcription, claim verification, and bias analysis across multiple sources.

Skills and Interests

Programming: MATLAB, Simulink, C++, Python, SQL, Arduino IDE, Git

Design: SolidWorks, Onshape, Altium, Fusion360, Soldering

Interests: Aircraft design, Flying, Jazz and Classical Music, Photography, Basketball, Origami