CHAD E. COPELAND

Aviation Safety and Technology Leadership

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U.S. citizen | U.S. Air Force and Air National Guard veteran

Professional profile

Commercial multiengine and instrument-rated pilot, FAA A&P mechanic, former FAA air traffic controller and technology founder with experience spanning aviation since 2000. Brings aircraft maintenance, airfield management, simulation quality assurance, UAS development, global expedition operations and documentary production to aviation safety and operational decision-making.

Founder of FALCRIN, Charlie Hanger and Wild Actual, and co-owner of 1892 Social Club. Leads product requirements, field programs, business development and communication across pilots, maintainers, software teams, scientists, clients and creative crews. Graduate study in Space Systems builds on a summa cum laude B.S. in Pilot Operations and practical experience in military, civil aviation and remote field environments.

Career impact

- Tested more than 100 simulated aircraft as a Microsoft contractor, with more than 7,500 hours of flight-simulation work; translated aircraft behavior and cockpit observations into reproducible findings for software teams.
- Developing FALCRIN around pilot health, wearable biometrics, cockpit situational awareness and emergency decision support across iPad, iPhone and Apple Watch.
- Created a 100-image global Windows photography campaign and led original screen work including Adventure Calls and the Space Needle renovation documentary.
- Named on the Topgolf Hurricane Harvey production team recognized by PR Daily: 1.2 million YouTube views, donations exceeding a $100,000 goal and first place in its 2018 Media Relations Awards video category (PR Daily, 2018).
- Advanced from fighter-aircraft maintenance into maintenance operations control and airfield management; served on active duty and in the Air National Guard, attaining Staff Sergeant, E-5.

Professional qualifications

FAA Commercial Pilot, Airplane Multiengine Land; Instrument Airplane; Private Airplane Single Engine Land privileges; FAA Mechanic, Airframe and Powerplant; FAA Remote Pilot, Small UAS; former FAA Air Traffic Control Specialist.

Aircraft experience: approximately 600 total hours, reported October 15, 2026; 124.0 multiengine land hours in September 2026 records. Microsoft simulation work is a separate experience category.

Aircraft flown include the Diamond DA62, Cirrus SR22T and Cessna 172. Additional logged exposure includes seaplanes, rotorcraft and gliders.

B.S., Pilot Operations, summa cum laude, CGPA 3.955. M.S., Space Systems, in progress; recorded graduate GPA 4.000 (Embry-Riddle Aeronautical University, 2026).

Aviation ventures and product leadership

Founder

FALCRIN LLC | January 1, 2020 - Present

Lead an aviation safety technology venture developing connected tools for pilot health monitoring, situational awareness and in-flight decision support.

- Define the company vision, product roadmap and release priorities, placing pilot safety and wearable biometrics at the center of the platform.
- Direct development of an iPad, iPhone and Apple Watch experience intended to bring pilot health, aircraft data, weather and traffic information into a unified safety interface.
- Translate operational needs into product requirements for cockpit displays, emergency workflows and interfaces designed for use under stress.
- Guide prototype evaluation, device testing and issue prioritization, with an emphasis on reliability, data accuracy and clear communication of system limitations.
- Shape FALCRIN’s brand, market position and business model, including the website, customer accounts and planned subscription offerings.
- Lead business formation and commercialization planning while establishing requirements for privacy, security and intellectual-property review.

Founder & Flight Simulation Developer

Charlie Hanger | July 1, 2025 - Present

- Founded Charlie Hanger to develop high-fidelity aircraft for Microsoft Flight Simulator, combining authentic USAF aircraft detail with an immersive experience for flight simulation enthusiasts.
- Lead development of an F-15E Strike Eagle for Microsoft Flight Simulator 2024, with a focus on cockpit accuracy, aircraft systems, flight characteristics, navigation, visual detail and VR compatibility.
- Apply operational familiarity with the F-15E and experience testing more than 100 aircraft as a Microsoft contractor to guide design, testing and quality standards.
- Direct aircraft research, 3D modeling, systems integration and simulator testing, with a long-term vision to expand the F-15 series and develop additional aircraft.

Carbon Compass

March 1, 2025 - Present

Aviation technology and civil aircraft operations

Flight Test Engineer

Microsoft | Contractor through Insight Global | Flight simulation and aviation quality assurance | Remote | 18-month contract beginning November 2023

- Tested more than 100 simulated aircraft, evaluating performance, integrated cockpit systems, automation behavior and operating workflows; brought more than 7,500 hours of simulation-work experience.
- Developed structured test scenarios and test-card observations using manufacturer documentation, operating procedures and practical pilot, maintainer and controller perspectives.
- Examined autopilot and flight-director modes, FMS/MCDU and EFB interactions, navigation, cockpit controls, VR usability and pilot workload.
- Documented reproducible discrepancies and operational consequences for engineering review; support issue triage, investigation, acceptance-focused evaluation, retesting and regression checks.
- Communicated findings to development collaborators, including Asobo, to improve simulator fidelity and the pilot experience.

Technical Adviser

DC Designs F-15 C/D/E/I Eagle for Microsoft Flight Simulator | 2024

Provided advice informing revised flight models acknowledged in the v1.7.2 release notes. Applied F-15E maintenance knowledge and simulation evaluation to product realism (Just Flight, 2024).

Strategic Partnerships Advisor, Ferry Pilot and A&P

Direct2 Air | Contract | Bend, Oregon | November - December 2022

- Developed Pacific Northwest business partnerships and marketing media for Direct2 Air and its related organization, KinectAir.
- Flew Diamond DA62 aircraft on empty-leg repositioning flights between destinations.
- Assisted with a DA62 annual inspection and return-to-service preparation, connecting aircraft readiness with flight and business requirements.

Aviation Contract

Epic Aircraft | Bend, Oregon | July - November 2022

Contributed aviation experience in an aircraft-manufacturing environment, supporting practical coordination between aircraft operations, maintenance and technical teams.

Airport Manager

City of Madras | Madras Municipal Airport, Oregon | Appointed November 2023

- Selected to lead municipal airport operations, facilities and relationships with airport users, tenants, contractors and aviation stakeholders.
- Reviewed operating procedures, records and administrative controls; documented concerns and escalated issues through established channels.

Airspace operations and UAS field delivery

Air Traffic Control Specialist

Federal Aviation Administration | Seattle ARTCC, ZSE | Auburn, Washington | 2009 - 2011

- Worked in the en-route air traffic control environment, building operational experience in aircraft separation procedures, sector coordination, clearances, handoffs and controller-pilot communication.
- Applied procedural discipline and situational awareness as traffic, weather and operational priorities changed; carried that National Airspace System perspective into later aviation and UAS work.

Flight Service Specialist

Lockheed Martin Flight Service | Earlier aviation experience

- Supported IFR and VFR planning through pilot briefings, weather interpretation, NOTAMs, pilot reports, route information and airspace considerations.
- Translated changing operational information into timely, clear pilot support and coordination.

Aircraft Maintenance

Alaska Airlines | 2008 - 2009

Contributed to line maintenance, service checks, troubleshooting, conformity inspection support and corrective-action documentation in airline operations.

UAS Systems Developer and Remote Pilot

Independent global assignments | Aviation, science and production clients | Commercial field work since 2012

- Began experimenting with airborne remote-controlled cameras in 2002, establishing the technical foundation for later UAS and expedition work (Bend Magazine, 2019).
- Developed, integrated, maintained and operated UAS platforms for demanding aerial-imaging and expedition assignments; experience spans all seven continents.
- Integrated aircraft, stabilized imaging payloads, telemetry, ground stations, power, radio links and field-data workflows with mission objectives and practical operating limits.
- Planned airspace access, weather decisions, site logistics, crew briefings, contingencies and data delivery; provided operator and crew guidance in remote environments.
- Supported aerial capture and technical-site engagements associated with National Geographic, BBC, Microsoft, Blue Origin, SpaceX, Tesla, NBC and Disney; applied technical troubleshooting and aviation communication across disciplines.

Pilot, Cinematographer, FAA Liaison and Air Boss

CNN / Blue Origin | New Shepard project coverage | West Texas | April - October 2016

- Coordinated aviation, UAS operations and aerial cinematography with production needs and fixed launch windows.
- Served as an interface among production participants, operational stakeholders and FAA contacts; brought flight-planning and airspace awareness to the coverage.

Pilot and Cinematographer

Tesla | Project engagements | January 2017 - February 2018

Contributed aviation and cinematic production capabilities to technology-focused commercial content. Additional SpaceX/Tesla site work is represented in the UAS portfolio.

Military service and recognition

Staff Sergeant

United States Air Force and Air National Guard | 2000 - 2009

Service across fighter-aircraft maintenance, Maintenance Operations Control Center duties and airfield management. Active duty: July 18, 2000 - May 13, 2005; honorable release. Attained SSgt, E-5, with date of rank October 31, 2007.

Aircraft maintenance and maintenance operations control

- F-15E crew-chief work at Elmendorf AFB, Alaska, supporting the 90th Fighter Squadron, followed by maintenance operations control.
- F/A-22 crew-chief work at Tyndall AFB, Florida, supporting the 43rd Fighter Squadron, followed by maintenance operations control; final active-duty unit was the 325th Maintenance Operations Squadron.
- Performed inspections, servicing, troubleshooting and maintenance documentation under technical orders; coordinated aircraft status, maintenance priorities, support resources and readiness information.
- Transferred to the Idaho Air National Guard in 2005; experience in the A-10 mission environment at Boise/Gowen Field, associated with the 124th Wing and 190th Fighter Squadron.

Airfield management

Oregon Air National Guard | 142nd Operations Support Flight, Portland IAP | March 31, 2006 - March 10, 2009

- Led airfield-management activity in Portland’s shared military and civil operating environment, supporting the 142nd Fighter Wing / 123rd Fighter Squadron F-15C/D mission.
- Coordinated inspections, runway and taxiway status, NOTAMs, operating restrictions, construction impacts, emergency interfaces, records and shift continuity with ATC and other base functions.

Specialties: Tactical Aircraft Maintenance Journeyman, 2A353A / 2A353; Airfield Management Journeyman, 1C751; duty AFSC 1C771, Airfield Management Craftsman.

Deployments and additional military experience

Kwang Ju AB, Korea, 2001; Osan AB, Korea, 2004; Red Flag TDY with the 90th Fighter Squadron. Reported support associated with Operations Enduring Freedom, Noble Eagle and Iraqi Freedom. Additional military aviation exposure includes an F-15D flight at NAS Key West with the 1st Fighter Squadron.

Decorations and ribbons

Air Force Achievement Medal; Air Force Outstanding Unit Award with two bronze oak leaf clusters; Air Force Good Conduct Medal; National Defense Service Medal; Global War on Terrorism Service Medal; Air Force Overseas Ribbon, Long Tour; Air Force Longevity Service Award with one bronze oak leaf cluster; USAF NCO Professional Military Education Graduate Ribbon; Small Arms Expert Marksmanship Ribbon with one bronze service star; Air Force Training Ribbon.

Leadership training

Basic Military Training, August 2000; Tactical Aircraft Maintenance Apprentice Course, 24 weeks, February 2001; Airman Leadership School, November 18, 2006. Additional airfield-management and ATC-fundamentals training.

Nonprofit leadership and research programs

Founder and Director

Wild Actual Inc. | *Science, education and conservation* | *May 2022 - Present*

- Lead a veteran-founded nonprofit connecting scientific fieldwork, aviation, documentary storytelling, environmental education and conservation.
- Develop program objectives, partner presentations, fundraising materials and operating plans; coordinate scientific collaborators, technical equipment, international logistics and field resources.
- Translate complex research and conservation subjects into accessible narratives while planning for weather, access, safety, data integrity and public use.
- Guide organizational administration, board coordination, budgets and project documentation alongside field and production work.

Songs of Giants

Expedition leader and host | Greenland fieldwork from 2024. Led Arctic field production and research coordination around humpback-whale observation and acoustic recording. Combined marine and UAS operations, local logistics, field communications and documentary capture. AI-assisted analysis is a research objective; the program has external expedition coverage and partner support (Helinox, 2025).

Living Water at Ford's Pond

Producer, director and narrator | Development, 2026. Developed a seasonal natural-history film and community-learning program for Ford's Pond in Sutherlin, Oregon. The proposal connects wildlife, water systems, carbon cycling and rural stewardship through a feature film, six teaching chapters, field guides, accessible media, screenings and an observation archive. Created original photography, project framing and funding materials with scientific collaboration.

Marine conservation interviews

Conducted the 2024 Captain Paul Watson interview inside the prison in Nuuk, Greenland; the Captain Paul Watson Foundation published the interview. Also interviewed foundation CEO Omar Todd and developed public-facing conservation discussion through Wild Actual (Captain Paul Watson Foundation, 2024).

Iceland field documentation and research

Documented the 2021 Fagradalsfjall eruption through The People's Volcano and related geothermal storytelling. Research development includes a convective-vortex manuscript using geotagged UAS imagery, webcam observations and university datasets, with attention to timing, metadata alignment and uncertainty.

Additional program development

Sustainable Aviation: research and partnership agenda exploring operational efficiency, alternative fuels, hydrogen and electric propulsion, predictive maintenance and decision support. Operation Sea Feather: climate-storytelling concept connecting air and ocean currents. Wild Watch: conservation sensor-network concept. Umpqua Valley A Wine Odyssey: destination-film development package incorporating treatment, teaser, budget and fundraising plans.

Flight Watch: earlier aviation decision-support concept work encompassing operational requirements, human factors, hazard identification and evaluation planning; continued product direction is represented in FALCRIN.

Global production and expedition leadership

Pilot, Photographer, Cinematographer and Expedition Leader

National Geographic | Global assignments and contributor work | January 2013 - Present

- Conduct aerial, terrestrial and underwater imaging for documentary, editorial and expedition objectives; connect technical capture with access, logistics, weather and field safety.
- Work with photographers, scientists, climbers, local partners and production teams to deliver usable visual material from remote and demanding environments.
- Served as heli-cam operator on the 2013 China karst expedition with photographer Carsten Peter, remote-imaging personnel and The North Face climbers; contributed to the An Empire of Rock / Flying China body of work (Quarrier, 2013).
- Contributed to ocean and conservation assignments associated with Pristine Seas and science-supported expedition work.

Global Brand Photographer and Pilot

Microsoft | Worldwide Windows visual campaign | 2015 - 2017

- Created the 100-image People of Action body of work for Microsoft's Windows visual initiative, combining international photography, aerial capture and expedition logistics.
- Managed capture and delivery across remote locations, cultures and technical conditions for desktop, tablet and mobile presentation.
- Published named Windows photography products include Twilight by Chad Copeland and Land Down Under By Chad Copeland.

Independent Producer and Director

CopelandRED LLC | Documentary and commercial production

Develop and deliver documentary, brand, destination and expedition work across concept development, planning, field production, technical capture and post-production coordination.

Creator, Writer, Director, Producer and Host

Adventure Calls | CopelandRED / Visit Central Oregon | 2020 - 2021

- Built an original destination series around Central Oregon's outdoor recreation, people, food, arts and history; connected tourism and community participants with field production and audience delivery.
- Created six released episodes, approximately 143 minutes in total, with web and Prime Video distribution. The series premiered April 22, 2020 (Visit Central Oregon, 2020).

Producer and Co-director

Space Needle Looking Upwards | CopelandRED | Seattle | 2018 production / 2019 release

- Led more than 18 months of documentary production around the landmark's active renovation, coordinating access with venue, architecture and construction participants.
- Translated engineering, architecture and history into an approximately 43-minute documentary; additional Space Needle photography appears in official press materials.

Broadcast and immersive production experience

Director of Cinema and VR

Ultimate Fighting Championship | Las Vegas, Nevada | May 2016 - December 2017

Served as VR director of photography and photographer for Conor McGregor-related work, combining immersive imaging, sports access and production coordination.

Aerial Director of Cinematography

PBS American Experience | The Boys of '36 | January - December 2016

Delivered aerial imagery for the documentary about the University of Washington rowing team and the 1936 Olympic Games. The official PBS production record credits Chad Copeland under Aerials (PBS, n.d.).

Expedition Leader and Series Host

Discovery Inc. | World Extreme Cinema development | January - December 2021

Developed an expedition-series concept pairing field storytelling with World Extreme Medicine physicians to examine survival, extreme environments and the role of medical teams.

Feature and Immersive Content Contributor

NBC Sports / Rio Olympics | 2016

Produced and directed feature and immersive content associated with Olympic coverage, combining location production, technical imaging and major-event delivery.

Cinematography and Production Team Contributor

Topgolf | In Focus Hurricane Harvey | 2017 - 2018

Contributed to documentary recovery stories following Hurricane Harvey. PR Daily credited the production team with videos that reached 1.2 million YouTube views and stimulated donations above the $100,000 goal; Topgolf received first place in the 2018 video category (PR Daily, 2018).

Director of Photography and Cinematographer

Urban Umbrella | Publicly listed creative team

Listed as DP / Cinematographer on Urban Umbrella's team, with production experience identified through Discovery, National Geographic and Adventure Calls (Urban Umbrella, n.d.).

Additional networks and client relationships

BBC natural-history and Planet Earth work; Netflix episodic production; CNN; CBS; Disney; ESPN; NFL Network; The North Face; Outside; Men's Journal; Sony; Toyota; Honda; Laird Superfoods; SpaceX; Tesla; Blue Origin; Microsoft. Roles and titles vary by assignment; specific credits appear in the screen and commercial registers.

Original formats in development

The Americas: hosted travel and community storytelling concept centered on culture, food and adventure. Mission Vision Values: interview format joining a guest's mission and a subsequent EV-cockpit conversation about their work and priorities.

Screen credits and episode register

Year	Title	Contribution
2020-2021	Adventure Calls	Creator, writer, director, producer and host
2020	ROSSO DAY.	Additional footage and production support
2019	Space Needle: Looking Upwards	Producer and co-director; executive-production role in project portfolio
2019	(people) of water	Cinematography, aerials and underwater imaging; Denver Film Festival selection
2018	American Vandal - The Brownout	Camera operator; season two, one episode
2017	Kingdoms of the Sky - Rockies	Camera operator; one episode
2016	American Experience - The Boys of ’36	Aerial camera; official PBS credit: Aerials
2016	Flight Three: Pushing the Envelope	Consulting producer and cinematographer
2016	Building 43	Cinematographer and camera operator
2015-2018	Through the Lens	Director, host, cinematographer and camera operator
2015	Brew Dogs - Aberdeen	Aerial camera and camera operator
2015	UFC Embedded - UFC 194	Camera operator; credited episode package
2015	Cornish College of the Arts - Cornish Commons	Filmmaker
2014	The Karsts of China	Cinematographer and camera operator; aerial fieldwork
2014	Days You Remember | Horizons	Footage contributor
2011	Frozen Planet	Photographer; one episode

Adventure Calls released episodes

Winter Haven - 23 minutes; Voice of the Deschutes - 21 minutes; Mountain Respite - 20 minutes; Western Trails - 24 minutes; Best Friend - 28 minutes; Timber to Tourism - 27 minutes. The six episodes total approximately 143 minutes.

The series covers winter recreation, watershed stewardship, Cascade landscapes, high-desert culture, pet-friendly regional life and the transition from timber to tourism.

Commercial work photography and public communication

Commercial performance and direction

Project	Role and scope
Toyota outdoor automotive spot, 2020	On-camera performer; production directed by Luke Neumann.
Honda Offroad, 2021	Director and on-camera performer in a Central Oregon high-desert production.
Laird Superfoods - Baja 1000	On-camera talent in a branded adventure production directed by Chris Sorenson.
Laird Superfoods - Naked Rescue	On-camera talent in a second branded production directed by Chris Sorenson.

Photography and published visual work

Windows products: Twilight by Chad Copeland, a six-image theme; Land Down Under By Chad Copeland, an eight-image theme featuring Australian aerial landscapes. Editorial and portfolio work spans National Geographic, Outside, Men’s Journal and other publications.

Expedition portfolio: Disko Bay and Greenland iceberg operations; Monument Valley aerial landscapes; the pueo of Kauai; humpback whales in the Kingdom of Tonga; Icelandic ice caves; overhead humpback imagery in Greenland; Cascades, China, Arizona, Crater Lake and Iceland field imagery. Experience includes aerial, underwater, gigapixel, panoramic and 360-degree/VR production.

Speaking and editorial contributions

- GeekWire Summit, Seattle, October 2, 2014: panelist with Chris Anderson discussing drones, applications and privacy (Soper, 2014).
- GeekWire Radio, September 27, 2014: guest on the use of drones in photography and field production.
- Outside, May 28, 2015: photographer and first-person contributor to Mission Impossible? Take Professional Photos With an iPhone, demonstrating mobile imaging in Iceland.
- Bend Magazine, September 4, 2019: featured adventure photographer, gallery owner and expedition professional. Wild in Africa, July 28, 2021: featured conservation and adventure interview.

Additional creative development

GRIMM Copeland edition: private book-layout and illustration project, including a 5 × 8-inch, 288-page interior and cover development.

Business ownership and community enterprises

Co-owner

1892 Social Club | Oakland, Oregon | 1892.io | February 1, 2025 - Present

- Co-own and operate a whisky lounge and private-event destination in Oakland's original bank, built in 1892; connect hospitality, local heritage and a collection of more than 450 whiskies from around the world.
- Travel internationally in search of rare whiskies, bringing distinctive bottles and firsthand sourcing stories into the collection and guest experience.
- Personally performed carpentry for the historic bank's upgrade, contributing practical craftsmanship to its transformation into a hospitality and gathering space.
- Created the name 1892 as a tribute to the bank's construction year and Oakland's history; develop the brand around rare whisky, travel, craftsmanship and the character of the original building.
- Develop hosted Whisky Room experiences that connect whisky history, origins, production and cask maturation with personal travel stories and guided discovery of the collection.
- Guide collection documentation and guest-facing whisky lists, organizing selections by origin, style, age, strength and cask characteristics to support inventory and guest education.
- Plan private gatherings, tastings, live music and community programming across the Main Lounge, Whisky Room and Patio; coordinate guest arrangements, suppliers, equipment and event support.
- Direct marketing, website content, online event-booking development, membership communications and promotions through 1892.io and social media.
- Develop experience-led travel concepts linking whisky and expedition storytelling, including the proposed Iceland: Fire, Ice & Flóki program with Wild Actual.

Marketing Director

Triple Oak Wine & Coffee | Oakland, Oregon | Current

- Develop visual campaigns, social media, event announcements and customer-facing content for wine, coffee, food and community programming.
- Guide website content, delivery promotion and storytelling around the historic space and the business's local identity.

Founder, Photographer and Workshop Leader

Copeland Gallery | Sunriver, Oregon | Opened February 2019

- Established a fine-art photography gallery presenting large-format wildlife and expedition imagery.
- Offered photography instruction for audiences ranging from mobile-camera beginners to experienced photographers; connected exhibitions with field storytelling and guided expedition offerings.

Additional customer service experience

TCBY | Great Falls, Montana | Early career. First employment experience in customer service, hospitality and product quality. Uber | Passenger service experience documented in June 2026. Reported 123 five-star rides, 100% acceptance and zero cancellations at that time.

Education and academic project portfolio

Master of Science in Space Systems

Embry-Riddle Aeronautical University Worldwide | January 2026 - Present

Graduate study in progress. GPA 4.000 in the May 28, 2026 transcript. Coursework spans space transportation, law and policy, Earth observation, the space ecosystem, human spaceflight, cybersecurity, space systems, space science, SATCOM and systems engineering.

Bachelor of Science in Pilot Operations

Embry-Riddle Aeronautical University Worldwide | Conferred October 31, 2025

Summa cum laude; CGPA 3.955; repeated Dean's List recognition. Academic work includes aviation safety, safety-program management, human factors, aircraft accident investigation, maintenance management, corporate aviation, aerodynamics, flight physiology, aviation weather, applied calculus and operational applications (Embry-Riddle Aeronautical University, 2026).

Graduate concept and analysis projects

- CIELO - Commercial Integrated Earth-Low-Orbit Hub, MSSS 540, August 2026: developed a human-spaceflight concept addressing modular architecture, protected survival functions, crew interaction, safe-haven response, interfaces, maintainability, lifecycle risk, technology maturity and verification planning.
- SCOPE Earth Twins Mission, SPAC 570, October 2026: developed a concept study report and Science Traceability Matrix for exoplanet direct imaging, starlight suppression and atmospheric characterization; evaluated instrument scope, public HD 20794 data, observation limits, cost uncertainty and verification needs.
- Robotic Arm Removal of Large Derelicts in High Inclination Low Earth Orbit, SPAC 520, October 2026: integrated target selection, weighted trade studies, sensors, guidance and control, communications, propulsion, power, thermal design, operations, readiness and cost into an academic mission concept.
- Space cybersecurity, SPAC 515, 2026: analyzed spacecraft command, telemetry and payload risks, including rendezvous/proximity operations, launch/GPS concerns and a pipeline-monitoring payload-computer vulnerability; proposed staged mitigation, testing and recovery controls.
- Satellite Communications Orbit Design, SPAC 560, October 2026: compared orbital access, link margins, terrain masking, latency, service gaps, data-rate requirements and antenna/power tradeoffs for a representative earthquake-response terminal.
- Link Geometry and Environmental Impacts, SPAC 560, October 2026: compared atmospheric and rain losses using consistent geometry. A modeled 4 W / 40-degree operating proposal increased delivered data by approximately 14% over the heavy-rain baseline, with explicit power and access tradeoffs.
- System Life Cycle and Design Processes in UAS Operations, SYSE 500, November 2026: related systems-engineering lifecycle processes, requirements and verification to early UAS design and operational experience in China.

Technical training service and additional experience

Additional education and professional development

Utah Valley University: 40 earned institutional credits in undergraduate aviation coursework, 2005-2008, including flight physiology, air traffic control, aviation law, air transportation management, corporate aviation, high-altitude/international operations and jet transport systems.

University of Alaska Anchorage: earlier undergraduate coursework, 2002-2003. Gulf Coast State College: English composition coursework, 2004. Air University / Community College of the Air Force: military technical and aviation-maintenance coursework; transferred management and business-communication credit.

FAA Academy, Oklahoma City: Air Traffic Basics, Initial En-Route Training and User Request Evaluation Tool training. USAF: fighter maintenance, airfield management, ATC fundamentals and NCO development. Pilot Candidate Selection Method score: 98/99, reported summer 2026; AFOQT Pilot score: 88, reported 2007.

Technical and operational capabilities

- Aviation and airspace: aircraft readiness, flight planning, instrument procedures, airfield status, NOTAM/PIREP interpretation, controller-pilot communication, operational risk and contingency planning.
- Test and product work: operational requirements, scenario definition, test cards, cockpit/avionics evaluation, discrepancy reproduction, defect prioritization, acceptance criteria, regression checks and engineering communication.
- UAS and field systems: airframe and payload integration, ground stations, C2/telemetry, radio-link planning, power and batteries, stabilized imaging, configuration troubleshooting, data integrity and field logistics.
- Research methods: mission concepts, trade studies, science traceability, sensor/payload analysis, technology-readiness assessment, verification planning, metadata alignment and uncertainty awareness.
- Production and leadership: documentary development, directing, cinematography, photography, VR/360 imaging, on-camera hosting, technical storytelling, partner coordination, budgets, fundraising materials, training and debriefs.

Humanitarian and community service

International Volunteer, Sung Bin Orphanage, South Korea | October-December 2001. Read to children, assisted with meals and daily support, helped welcome children arriving in need of care, and served as a liaison with the U.S. Air Force.

Continued community contribution through conservation education, public storytelling, photography teaching, rural hospitality and local event programming.

Languages and field interests

English: native/bilingual proficiency. Spanish: elementary proficiency. Field experience and interests include expedition photography, rock climbing, underwater imagery, marine and Zodiac operations, and competitive USPSA shooting.

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Portfolio

Professional work: https://www.chadcopeland.io
LinkedIn: https://www.linkedin.com/in/chadecopeland
Wild Actual: https://www.wildactual.org
FALCRIN: https://falcrin.com