

Bhomin B Chauhan
Melbourne, FL | +1 307 761 9000 | bchauhan2017@my.fit.edu | [LinkedIn](#)

SUMMARY

I am an experienced, published graduate student with demonstrated academic research and 3+ years of industry experience in client-facing advanced air mobility (AAM), electrical vertical take-off and landing (eVTOL), and uncrewed aircraft systems (UAS) projects. My career aspirations are to study the integration of emerging aviation technologies into the current aircraft operations, identify and develop AAM infrastructure requirements, and establish human factors implication of AAM operations. I have presented my published work on aviation safety, airport operations, AAM operations, and human factors at several national and international conferences and symposiums. I am co-leading the AAM research at the ATLAS lab, Florida Tech, where we study the human factor associated with AAM operations.

EDUCATION

Florida Institute of Technology	Melbourne, FL
Ph.D. in Aviation Sciences, Concentration: Human Factors	Expected May 2024
Florida Institute of Technology	Melbourne, FL
M.S. in Applied Aviation Safety (Part 107 Remote Pilot Certified)	May 2019
Gujarat Technological University	India
B.E Aeronautical Engineering	May 2015

EXPERIENCE

Hovecon, LLC	Melbourne, FL
<i>Advanced Air Mobility Specialist</i>	Jan. 2023 – Present
<ul style="list-style-type: none"> • Lead the development of a whitepaper on the Airport of the Future. <ul style="list-style-type: none"> ○ Conducted an in-depth analysis of the AAM market, eVTOL developments, and infrastructure developments. ○ Determined the level of impact of emerging technologies (eVTOL, UAS) on airside and landside components of an airport. • Identified variables and conducted a thorough data analysis of airport characteristics on multi-modal charging infrastructure for eVTOL operations at general aviation and commercial airports in MI. • Identified airside and landside infrastructure requirements, including vertiport site selection, taxiway and runway designs, airspace considerations, and emerging aircraft technologies at KSYR. • Assisted the project lead in identifying factors to consider for forecasting commercial drone operations in North Carolina. <ul style="list-style-type: none"> ○ Evaluated commercial drone package delivery operations. ○ Reviewed the National Environmental Policy Act (NEPA) review process for Part 135 drone operations. ○ Identified and documented relevant industry and Federal Aviation Administration (FAA) forecasts and criteria to consider for environment assessment for drone package deliveries. ○ Assisted in developing the write-up of the findings and prepared the deliverable for the clients. 	
ATLAS Lab, Florida Tech	Melbourne, FL
<i>Graduate Research Assistant</i>	Aug. 2020 – Present
<ul style="list-style-type: none"> • Simplified vehicle operations (SVO) and eVTOL pilot interfaces. <ul style="list-style-type: none"> ○ Currently investigating the human factors implications of eVTOL aircraft, focusing on eVTOL pilot interface design, electric battery display designs, autonomy, and urban air mobility (UAM) operational environment on pilot cognition. ○ Responsibilities include providing weekly briefings to the team on the current state of the AAM industry, demonstrating AAM operational concepts and infrastructure requirements, and assisting the lab's director with potential research collaborations in the industry. 	

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Ernst & Young Parthenon

Melbourne, FL

Client Service Intern

Sept. 2022 – Nov. 2022

- Assisted the internal transportation team on tasks associated with identifying human factors related to ground infrastructure requirements for the AAM ecosystem.
- Conducted operational research and documented a framework for deploying an automated ground vehicle system (AGVS) for airside operations.
- Successfully used Specified Risk Operations Technique (SORA) methodology to calculate ground risk for drone delivery operations.

College of Aeronautics, Florida Tech

Melbourne, FL

Graduate Teaching Assistant, AVT 5201: The Urban Air Mobility (UAM) Ecosystem

Fall 2021, 2022

- Assisted course instructor in developing course content, assignments, and student project requirements.
- Assisted graduate and undergraduate students with course discussions, assignments, and UAM-related inquiries.

Skymanatics, LLC

Melbourne, FL

Aviation Research Analyst

Feb. 2020 – May 2021

- A Guidebook to Prepare Airports for Transformations in Wireless Connectivity, ACRP 03-57,
 - Conducted a comprehensive review and summarized ACRP reports, syntheses, and findings on the potential application of wireless technology at airports.
 - Supported subject matter experts (SME) in describing airport use cases, defining metrics and methodologies for investment decision-making, and describing best practices in strategic airport planning.
- Safety Analysis Framework for Urban Air Mobility, project proposal
 - Studied emerging UAM operations and identified gaps in safety assessment.

College of Aeronautics, Florida Tech

Melbourne, FL

Graduate Research Assistant

Aug. 2017 – May 2019

- Applied Aviation Safety, Funded Research
 - Extracted operational hazards and aircraft accident causes from the National Transportation Safety Board (NTSB) accident database.
 - Categorized operational hazards, risks, and leading causes in the Human Factors Analysis and Classification System (HFACS).
 - Conducted risk assessment and root cause analysis of aviation operational hazards.
- UAS Integration into the National Airspace System, Master's Thesis
 - Surveyed Federal UAS reports to identify safety trends in commercial UAS operations.
 - Identified contributing factors in UAS incidents and accidents.
 - Categorized identified hazards, threats, and consequences in HFACS.
 - Suggested safety recommendations for UAS operation in the National Airspace System.
- Airport Co-operative Research Program Design Competition (ACRP), Airport Runway Incursion Prevention System*
 - Developed a theoretical implementation plan for a system consisting of LiDAR and pressure plates to detect and prevent runway incursions.
 - Conducted a thorough cost/benefit analysis for airport integration.
 - Interviewed industry personnel on runway incursions, airport operations, and safety.

Valkaria – X59

Valkaria, FL

Airport Operations Intern

Oct. 2019 – Feb. 2020

- Assisted the Airport Director with airfield operations and maintenance of airport facilities.
- Assisted with the runway, taxiway, and ramp area inspection for foreign object debris (FOD).

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AWARDS, LEADERSHIP, and CO-CURRICULAR

- Advanced Air Mobility Scholar, Human Factors at Advanced Air Mobility Institute
- Invited and submitted a review for an urban air mobility paper submitted to the International Journal of Human-Computer Interaction Journal.
- **Session Chair**, UAM/AAM Infrastructure Session at the 22nd International Symposium of Aviation Psychology, Rochester, New York.
- **Student Volunteer** at Vertical Flight Society Forum 79 May 2023
- First prize in Transportation Research Board's ACRP University Design Competition*
- Drone Club at Florida Tech – President Jan. 2022 – Present
 - Responsible for managing the club's overall objective and mission.
 - Organizing and managing campus-wide drone events.
- Human Factors and Ergonomics Society (HFES) Florida Tech Chapter – Vice President May 2018 – 2019
 - Facilitated student engagement with industry subject matter experts (SMEs).
 - Organized SME human factors seminars on campus.

PUBLICATIONS, PRESENTATIONS, CONFERENCE PROCEEDINGS

- 1) Carstens, D., Howard, S., Barrie, M., **Chauhan, B.**, Bouran, A., Sudharsan A., Mahlman, J., Hunt, L., Egoroff, E. (2018). Bow-tie Industry Application as a Risk Assessment Tool. Manuscript submitted for publication.
- 2) Carstens, D., Howard, S., Barrie, M., Mahlman, J., Sudharsan, A., **Chauhan, B.**, Bouran, A., Hunt, L., & Egoroff, E. (2020). *Proceedings of International Conference on Industry, Engineering & Management Systems*. Industry, Engineering, and Management Systems.
- 3) Chaparro Osman, M., Namukasa, M., Carmody, K., **Chauhan, B.**, Berkel, G., & Carroll, M. (2022, November). Perspectives for the Future: Considerations for UAM Aircraft. *Proceedings of the Interservice/Industry Training, Simulation, & Education Conference (IITSEC)*, Orlando, FL.
- 4) **Chauhan, B. B.**, & Carroll, M. (2021). Human Factors Consideration in Urban Air Mobility. In International Symposium in Aviation Psychology (pp. 7-12). <https://doi.org/10.5399/osu/1148>
- 5) **Chauhan, B. B.**, Carmody, K., Namukasa, M., Sharma, V., Berkel, G., Adorno, Y., Smith, H., & Carroll, M. (2023, June). Guidelines for Information Display Characteristics for eVTOL Pilot Interfaces. In Dr. Meredith Carroll (Chair), *22nd International Symposium on Aviation Psychology* [Symposium]. Rochester Institute of Technology, Rochester, New York.
- 6) **Chauhan, B. B.**, Osman, M. C., Carmody, K., & Carroll, M. (2022, October 24–26). *Advanced Air Mobility: Human Factors Considerations for Current eVTOL Pilot Interfaces* [Conference session]. National Training Aircraft Symposium. Embry-Riddle Aeronautical University, Daytona Beach, FL, United States. <https://commons.erau.edu/ntas/2022/day-3/11>
- 7) **Chauhan, B.**, Egoroff, E., Abdullah, B., & Carstens, D. (2018, April). Airport Runway Incursion Prevention System. *ACRP Design Competition*. <https://vsgc.odu.edu/acrpdesigncompetition/2018-competitionwinners/>
- 8) Mehta, R., **Chauhan, B.**, Edwards, M., Rosser, T., Dunbar, V., & Rice, S. (2019). Does a SWT Reverse Contagion Effect Exist from Humans to Automation? *Collegiate Aviation Review International*, 37(1), 90-106. <https://doi.org/10.22488/okstate.19.100206>
- 9) Mehta, R., **Chauhan, B.**, Edwards, M., Rosser, T., Dunbar, V., & Rice, S. (2019, October). Is there a System Wide Trust Reverse Contagion Effect from Humans to Automation? *Presentation at the 72nd Annual UAA Education Conference & Expo*, Memphis, TN. <https://doi.org/10.22488/okstate.19.100206>
- 10) Namukasa, M., Carroll, M., Chauhan, B. B., Sharma, V., Carmody, K., & Wilt, D. (2023). Key Constructs, Measures, and Considerations for Human Factors Researchers in the Advanced Air Mobility Domain. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*, 0(0). <https://doi.org/10.1177/21695067231200876>