

**Role:** CEO @ Multi AI, Inc.

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## Education

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| 2019 – 2022 | <b>University of Texas at Austin</b> , Austin, TX<br>Ph.D. in Mechanical Engineering (Specialization: Robotics) |
| 2016 – 2018 | <b>University of Texas at Austin</b> , Austin, TX<br>M.Sc. in Mechanical Engineering                            |
| 2011 – 2016 | <b>RWTH Aachen University</b> , Aachen, Germany<br>B.Sc. in Mechanical Engineering                              |
| 2014 – 2015 | <b>University of Michigan</b> , Ann Arbor, MI<br>Visiting Undergraduate Research Scholar                        |

## Professional Experience

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|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 09/2022 – Present | <b>Multi AI, Inc.</b> (San Francisco, CA & Austin, TX) – <b>Chief Executive Officer</b><br>Development of multi-agent decision-support AI for the DoD.          |
| 11/2021 – 09/2022 | <b>Droneconia LLC</b> (Austin, TX) – <b>Chief Technology Officer</b><br>Development of multi-drone mission planning AI for public safety applications.          |
| 01/2019 – 12/2022 | <b>Autonomous Systems Group</b> (UT Austin) – <b>NSF-Supported Researcher</b><br>Research in novel applications and navigation algorithms for aerial robotics.  |
| 08/2016 – 12/2018 | <b>Advanced Manufacturing Center</b> (UT Austin) – <b>Research Assistant</b><br>Research in data-driven control for additive manufacturing.                     |
| 01/2016 – 04/2016 | <b>Mercedes-Benz</b> (Stuttgart, Germany) – <b>Operations Assistant</b><br>Robotic assembly optimization for OM-651 engine at Daimler headquarters.             |
| 11/2015 – 12/2015 | <b>Ford Germany</b> (Cologne, Germany) – <b>Maintenance Intern</b><br>Maintenance support of ABB robots for aluminum die casting of engines.                    |
| 04/2015 – 11/2015 | <b>Fraunhofer Institute of Laser Technology</b> (Aachen, Germany) – <b>Research Assistant</b> ; Laser metal deposition for crack-free 3D metal objects.         |
| 10/2014 – 02/2015 | <b>University of Michigan</b> (Ann Arbor, MI) – <b>Undergraduate Research Scholar</b> ; Development of high-sensitivity signal detection mechanisms.            |
| 07/2014 – 10/2014 | <b>Machine Tools and Production Engineering Lab</b> (Aachen, Germany) – <b>Research Assistant</b> ; Assisting strategic positioning of global production sites. |

## Achievements & Recognitions

- 2024 **Pentagon Wargaming Development Partnership.** Six-figure SBIR Phase III by Chief of Wargaming, OUSD A-S (Pentagon), and Air Force Autonomy Prime.
- 2024 **Invited Expert to Texas AI Caucus.** Advised Texas State Representative Giovanni Capriglione on AI policy and commercial regulations.
- 2024 **Seven-Figure TACFI Selection by US Air Force.** Awarded for highly-selective Funding Increase program by Air Force Ventures for decision-support AI.
- 2023 **Major Phase III Award by US Air Force Autonomy Prime.** Six-figure contract for multi-agent coordination AI.
- 2023 **Capital Factory Accelerator.** Selected for Texas's largest and most active startup accelerator.
- 2022 **Launch Texas Awardee.** Launch Texas awardee of newly-founded space entrepreneurship program at UT Austin.
- 2022 **Major Phase II Award by US Air Force Agility Prime.** Secured first six-figure contract for multi-agent coordination AI to accelerate rapid scaling in DoD.
- 2022 **Selection for Elite Startup Accelerators.** MassChallenge finalist out of 400 startups and selection to exclusive Air Force Technology Acceleration Program.
- 2022 **Texas Venture Labs Commercialization Award Winner.** Five-figure prize for highest commercialization success among Texas student startups.
- 2022 **Bridge-to-Phase II Award Winner.** UT Discovery grant for accelerating national security decision-support AI.
- 2022 **Major Air Force Programs and Prime Support.** Formal endorsements from AFWERX, AFRL ACT3, RQQ, RISB, and Textron for startup's solution offering.
- 2021 **GAIN Mechanical Engineering Department Award.** Outstanding research contributions award at University of Texas at Austin.
- 2018-2020 **National Science Foundation (NSF)-Supported Researcher.** Selected researcher on multi-year project with CalTech, Berkeley, Northeastern, and RPI.
- 2017 **Sandia National Laboratories Grant.** Proposed and won five-figure funding for innovative laser pre-scan process enhancing 3D printing quality.
- 2015 **Undergraduate Research Opportunity Award.** Dual award by the University of Michigan and RWTH Aachen University for undergraduate research.

## Publications

- 2024 **A. Nettekoven, Matthew Carlin, Ufuk Topcu.** "Large-Scale Fleet Coordination for Contested Logistics." *Technical Report to US Air Force SBIR Phase II-III.*

- 2022 **A. Nettekoven.** "On the Feasibility of 3D Printing with Multicopters." *Ph.D. Dissertation at the University of Texas at Austin.*
- 2022 **A. Nettekoven,** Scott Fish, Joseph Beaman, and U. Topcu. "Towards online monitoring and data-driven control: a study of segmentation algorithms for infrared images of the powder bed." *2022 International Solid Freeform Fabrication Symposium.*
- 2021 **A. Nettekoven,** N. Franken, and U. Topcu. "Geometrical Analysis of Simple Contours Deposited by a 3D Printing Hexacopter." *2021 International Solid Freeform Fabrication Symposium.*
- 2021 **A. Nettekoven** and U. Topcu. "A 3D Printing Hexacopter: Design and Documentation." *2021 International Conference on Unmanned Aircraft Systems (ICUAS).*
- 2021 Z. Wang, X. Xiao, **A. Nettekoven,** et al. "From agile ground to aerial navigation: Learning from learned hallucination." *2021 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS).*
- 2019 Y. Tan, B. Jin, **A. Nettekoven,** et al. "An encoder-decoder based approach for anomaly detection with application in additive manufacturing." *2019 18th IEEE international conference on machine learning and applications (ICMLA).*
- 2019 Z. Xu, **A. Nettekoven,** et al. "Graph temporal logic inference for classification and identification." *2019 IEEE 58th Conference on Decision and Control (CDC).*
- 2018 **A. Nettekoven.** "Predictive iterative learning control with data-driven model for near-optimal laser power in selective laser sintering." *2018 Master's Thesis.*
- 2018 **A. Nettekoven,** S. Fish, J. Beaman, and U. Topcu. "Predictive Iterative Learning Control with Data-Driven Model for Optimal Laser Power in Selective Laser Sintering." *2018 International Solid Freeform Fabrication Symposium.*

## Services

- 2021 – present **Peer Reviewer for Robotics and Engineering Conferences:**
- International Conference on Robotics and Automation (ICRA)
  - International Conference on Intelligent Robots and Systems (IROS)
  - IEEE Robotics and Automation Letters (RA-L)
  - American Control Conference (ACC)
  - North American Manufacturing Research Conference (NAMRC)
  - Solid Freeform Fabrication Symposium (SFF)
  - Conference on Automation Science and Engineering (CASE)
- 2020 – 2023 **Guest Lecturer for Undergraduate Feedback Control.** Presentations of real-world control applications to engineering students at UT Austin.

- 2021     **Texas Robotics Motion Capture Space.** Designed, directed, and commissioned high-resolution motion capture space for UT Austin robotics program.
- 2021     **Public Safety Drone Collaboration Workshop.** Organized Drone workshop for Austin PD, Texas DPS, Travis County Sheriff's Office, and Austin Fire.
- 2020 – 2022     **Research Mentor.** Supervised 7 undergraduate research assistants: Sriram Bommakanti, Kadhira Umasankar, Nicholas Franken, Harrison Jin, Meenakshi Swaminathan, Steven Diep, and Mario Gonzalez.
- 2020     **Research Instructor.** Led full-time summer research internships for 17 undergraduate students in the Autonomous Systems Group.

### Press Coverage

- 2023     Jeremy R. Dunn. "Tech Connect partner uses AI to assist in in-theater mission planning." *Defense Visual Information Distribution Service* (08/23/2023).
- 2023     Deborah Yao. "Hybrid AI Reduces Generative AI Hallucinations, Applied Intelligence Live! Austin 2023." *AI Business* (09/21/2023).
- 2022     Nat Levy. "Ready for Launch." *Texas Engineer* (2022-2023 issue).

### Invited Talks and Presentations

- 12/2024     US Air Force Wargaming Offices and OUSD A-S Chief of Wargaming Workshop.
- 03/2024     HAF/a5, SAF/SA, HAF/A4, RGPA, AMC A5-8, AMC A9 Wargaming Capability Review.
- 09/2023     Capital Factory Accelerator First Look Kickoff.
- 08/2023     National Security Innovation Council (NSIC).
- 05/2023     Texas Innovation Center Board Meeting and Luncheon.
- 11/2022     Launch Texas Award and Kickoff at the University of Texas at Austin.
- 09/2022     Blue Tech Collider Multi-Drone Show Case.
- 08/2022     Solid Freeform Fabrication Conference 2022.
- 07/2022     MassChallenge Early-Stage Startup Accelerator Kickoff.
- 02/2022     Hanscom and Incirlik US Air Force Base Capability Review.
- 08/2021     Solid Freeform Fabrication Conference 2021.
- 06/2021     International Conference on Unmanned Aircraft Systems.
- 04/2021     Texas Robotics Research Seminar.
- 02/2021     Graduate and Industry Networking event, University of Texas at Austin.

- 10/2020 Walker Department of Mechanical Engineering, University of Texas at Austin.
- 03/2019 NSF Cyberphysical System Review with Caltech, Berkeley, Northeastern, RPI.
- 08/2018 Solid Freeform Fabrication Conference 2018.
- 02/2017 America Makes Project Review with US Air Force AFRL.
- 06/2016 International Center for Sustainable Textiles at RWTH Aachen University.
- 02/2015 Barton Research Group at the University of Michigan.