Benjamin Molnar
benjaminmolnar.com
benjamin@benjaminmolnar.com
301-710-4966

SUMMARY

Highly motivated engineer interested in aerospace, robotics, and computer science

EDUCATION

Georgia Institute of Technology – 4.00 GPA | 2024-present
M.S. Computer Science – Machine Learning Specialization

- Currently completing master's degree in computer science
- Focus on AI/ML techniques and their implementation in robotics applications

University of Maryland, College Park – 3.87 GPA | 2019-2021
B.S. Mechanical Engineering, A. James Clark School of Engineering

- Dean's Scholarship, SME Scholarship
- Completed undergraduate studies in 2.5 years
- Designed tripteron – a 3D motion kinematics system for 3D printing applications
- Designed autonomous large scale hydroponics system for urban use – Sustainability award winner

WORK EXPERIENCE

Advanced Manufacturing Engineer
Lightweight Innovations for Tomorrow (LIFT) | 2022-2024

- Led research to determine the best process parameters for novel alloys in the LPBF process
- Designed network to virtually integrate machines, sensors, and microcontrollers with custom designed PCBs, including ESP32s, on manufacturing floor
- Identified successful weld parameters by creating an algorithm to bulk extract bead characteristics from optical topography surface texture scans

Pathways Intern - Additive Manufacturing
National Institute of Standards and Technology (NIST) | 2019-2022

- Published original paper investigating thermography of overhanging metal AM parts in the NIST Journal of Research
- Created executable app with GUI from MATLAB to process raw thermal camera data and output thermal videos, cooling rate plots, melt pool length graphs, etc.
- Designed "Standard AM Kilogram" an impossible to traditionally manufacture part to showcase advantages of AM

Student Volunteer - Additive Manufacturing
National Institute of Standards and Technology (NIST) | 2018-2019

- Designed study to determine the effect of overhang angle on part quality during LPBF process
- Coordinated use of high-speed thermal camera, visual light cameras, and thermocouples to collect in-situ process data for LPBF

EXTRACURRICULAR ACTIVITIES

SME – Life Member (2018 – Present), ASME – Member (2019 – Present), Volunteer Tutor (2013 – Present), FIRST (2018 – 2023), BSA – Eagle Scout (2011 – 2019), Cross Country (2013 – 2019)

SKILLS

NX, KiCAD, SOLIDWORKS, Inventor, COMSOL, SMD Soldering, Welding (MIG/TIG), C++, Python, MATLAB, PlatformIO, Arduino Framework, HTML/CSS/JS, Laser Powder Bed Fusion (LPBF), Fused Deposition Modeling (FDM), Stereolithography (SLA), Marlin, Photoshop, Premiere