

Benjamin Lee Dyer

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EDUCATION & PROFESSIONAL DEVELOPMENT

Masters of Science, Computer Science (MSCS) - GPA= 4.000

University of Colorado Boulder: College of Engineering and Applied Science

Graduation: May, 2025

Boulder, CO

- Earned **Graduate Certificate in Artificial Intelligence** as part of MSCS program

Google IT Automation with Python Professional Certification

Coursera Specialization offered by Google

Completed: July, 2022

Online

Bachelors of Science, Mechanical Engineering (BSME)

Colorado State University: College of Mechanical Engineering

Graduation: May, 2021

Fort Collins, CO

ENGINEERING AND TECHNICAL SKILLS

Programming Languages: (Proficient): Python, C, MATLAB, HTML, CSS, **(Familiar with):** Java, R, Ruby, SQL

DevOps & Automation: Continuous Integration (CI), Continuous Deployment (CD), GitHub Actions, Git Hooks, Docker, Bash

Tools and Technologies: Git, Linux (RHEL), VS Code, STM32CubeIDE, Docker, Cloud VPS

Embedded Systems: STM32, Raspberry Pi (3B, Pico), Arduino Leo/Micro

Specialized Software Skills: Test Automation, Robotics, Computer Vision, Machine Learning, Web Design, Signal Processing

RELEVANT WORK EXPERIENCE:

Personal Projects

- (app.pngprint.me) Built and **Cloud-Host** an automated STL 3D model generator for cookie cutters from static PNG images
- (bendyprojects.com) Created a personal Portfolio website using **Python**, deployed on **Raspberry Pi 3B** on my home desk.

Test Engineer II, Agile RF Systems, LLC

Berthoud, CO - Aug. 2023 - Present

- Led design and testing of **Production Software** for controlling Phased Array Devices and Radar using **Python** and **C**
- Led Software Design of **Controls, Signal Processing** of Radar data using **Docker-Compose** (Podman) to deploy on **RHEL**
- Built extensive **Python-based Test Automation** environment for controlling devices, processing data, and report generation
- Attended course and earned **FAA Part 107** License to fly drones for Test Automation purposes
- **Automated** Phased Array Radar calibration and test using **Robotic Arm** positioner for high-precision alignment
- Developed and optimized **STM32/Linux** firmware for Radar PCBs and test Ground Support Equipment (GSE)
- Built **CI/CD** pipelines to automate testing, deployment, and production workflows
- Developed an internal asset-tracking **Web App** using **Python**, Flask, and Jinja2, improving data/documentation management
- Managed company-wide **Git** repositories in **Gitea** (**GitHub** analog), improving software collaboration across teams.
- Designed electrical interfaces and created wiring diagrams/harness drawings for **Deliverable Hardware**
- Worked with customers to iterate through **Design Requirements** for **Deliverable Software** systems

Test Engineer I, Blue Canyon Technologies

Lafayette, CO - Nov. 2022 - Aug 2023

- Automated production and administrative tasks using **Ruby, Python**, and VBA to improve lab efficiency
- Developed utilities in Python and Ruby to automate routine **oscilloscope** captures and generate HTML reports
- Used Ball Aerospace's COSMOS (Ruby) to create, modify, and debug **Automated Testing** scripts for electrical hardware
- Performed functional testing on flight and GSE electrical hardware, ensuring compliance with specifications
- Created software-driven automation concepts and presented scope-of-work, POCs, and cost estimates to leadership

Mechanical / Test Engineer (Contract), Microsoft

Fort Collins, CO - June 2021 - Nov. 2022

- Developed **Machine-Vision Algorithms** to automate object detection and camera targeting using motors
- Automated sensor testing and data processing with **Python, MATLAB**, and **Powershell**, improving testing efficiency
- Designed software routines for communication with testing equipment via NET, I2C, and serial connections
- Built simple electrical systems to drive stepper motors, LEDs, microcontrollers, and read thermocouples
- Designed and 3D-printed camera testing equipment to meet project specifications

OTHER EARLY WORK EXPERIENCE:

Project Manager, Mechanical Engineer, CSU Sr. Design Project, Woodward Inc.

Fort Collins, CO, Fall 2020 - Spring 2021

Mechanical Engineering Intern, Redstone Aerospace /II-VI Incorporated Optical Systems

Longmont, CO Summer '16, '17, '19