Benjamin Lee Dyer

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EDUCATION & PROFESSIONAL DEVELOPMENT

Masters of Science, Computer Science (MSCS) - GPA= 4.000   Graduation: May, 2025
University of Colorado Boulder: College of Engineering and Applied Science   Boulder, CO

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

Google IT Automation with Python Professional Certification   Completed: July, 2022
Coursera Specialization offered by Google   Online

Bachelors of Science, Mechanical Engineering (BSME)   Graduation: May, 2021
Colorado State University: College of Mechanical Engineering   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
Embedded Systems: STM32, Raspberry Pi (3B, Pico), Arduino Leo/Micro
Specialized Software Skills: Test Automation, Robotics, Computer Vision, Machine Learning, Web Development (Flask, Jinja)

RELEVANT WORK EXPERIENCE:

Test Engineer II, Agile RF Systems, LLC   Berthoud, CO - Aug. 2023 - Present
- Led design and testing of production software for controlling Phased Array devices using Python and C
- Developed production radar software for controls and processing in embedded and desktop Linux environments
- Wrote radar data signal processing pipeline in C and Python and used Docker (Podman) to deploy on Red Hat Linux
- Built an extensive Python-based test automation environment for controlling devices, processing data, and report generation
- 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)
- Engineered custom communication protocols for Phased Array Radar devices, optimizing transmission and reliability
- 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, 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
- Worked closely with systems engineers to translate requirements into software and hardware specifications

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 test 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 applications 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

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OTHER EARLY WORK EXPERIENCE:

Project Manager, Mechanical Engineer, CSU Sr. Design Project, Woodward Inc.   Fort Collins, CO, Fall 2020 - Spring 2021
Mechanical Engineering Intern, II-VI Incorporated Optical Systems   Longmont, CO Summer 2019
Mechanical Engineering Intern, Redstone Aerospace Corporation   Longmont, CO Spring-Summer 2016, Summer 2017